THE LANCET.

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LECTURES
ON THE
THEORY AND PRACTICE OF MEDICINE;

NOW IN COURSE OF DELIVERY AT THE
THEATRE OF ANATOMY AND MEDICINE, WEBB-STREET, SOUTHWARK.

BY

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LECTURES II. AND III.

INFLAMMATION.—*The reparative power of Nature shown by tying a dog's intestine. Inflammation sometimes a preservative action. Adhesive and ulcerative inflammation. Curative effects of inflammation seen in intus-susceptio and in hernia. Discharge of abscess in the liver through the abdominal parietes, and through the bronchia or trachea. Explanation of this process. Anatomy and physiology of inflammation. Circulation in the frog's foot. Passage of the blood through the minute arteries and veins. Causes of inflammation; its nature and effects. Experiments to determine these. Formation of cicatrix, pus, cysts, abscesses. New vessels. Ligature of arteries in cases of aneurysm. Distant influence of inflammation. Congestion.*

GENTLEMEN:—I proceed, without further preliminary observation, to the proper subjects of this course of lectures, and I begin with Inflammation, which may be justly designated the most important topic in the theory of medicine and surgery.

In treating of this, and every branch of my subject, I shall endeavour to associate *principles* with interesting and useful *facts*, so that they may fix each other in your memory, and recall each other, in your subsequent career of practice, to your mind.

The *fact* which I would first bring before you, is a remarkable experiment, displaying the wonderful resources of nature in warding off the fatal event in various diseases and accidents. Suppose you take a dog, make an incision through the parietes of the abdomen, draw out a portion of the intestine, and apply a ligature firmly round it, what do you think will be the result? Will the animal die, or survive this formidable operation? The uninterrupted continuity of the canal is essential to life. That continuity has been broken by the application of the ligature. Still the animal does recover; and he recovers by one of the most remarkable preservative processes of the animal economy.

I must here take the opportunity of stating that inflammation, although one of the most formidable of diseases, is not always a disease; it is frequently a process of preservation or of restoration. There is also a *healthy* as well as a *morbid* kind of inflammation.

But *how* does the animal, whose intestine is obstructed by a ligature, recover,—how does he survive? The ligature, on being tightened, divides the internal *mucous* membrane, which lines the intestine; and it brings the portions of the external *serous* membrane, which covers the intestine, into contact. Inflammation is set up; albumino-fibrine, or coagulable lymph, is effused between the contiguous surfaces of the serous membrane, and constitutes an *adhesion*, or bond of union, between them, affording a beautiful example of adhesive inflammation; the subjacent textures, not divided by the ligature, are severed by the ulcerative inflammation; the ligature is separated, passes into the cavity, or canal, of the intestine, and is ultimately expelled with the fæces: in this wonderful manner is the continuity of the canal restored. I should observe that, in order that the experiment may be successful, the animal should be first made to fast for four-and-twenty hours, and a portion of the intestine, near the stomach, should be chosen as the place to which the ligature is to be applied.

Now, I believe that you can never forget this extraordinary fact; and, if so, I think you will always retain in your minds the principles which it is intended to illustrate; these are, the principles of the *adhesive* and of the *ulcerative* inflammation. You will,

also, infallibly remember that the former takes place between adjacent surfaces of *serous* membrane. I shall immediately explain to you how different the event would have been, had the covering of the intestine consisted of a *mucous* membrane.

The resources of nature are occasionally displayed in a still more wonderful manner in another experiment. If, instead of applying the ligature simply round the intestine, it is made to include a knuckle or angle of this canal, the animal has still, in some instances, survived. In this case similar processes of ulcerative inflammation have been accomplished, whilst the continuity of the canal has been preserved by means of a *cyst* formed by the adjacent portions of the peritonæum of the mesentery, of the contiguous intestine, or of the parietes of the abdomen, united by adhesive inflammation.

Do not imagine that these experiments are mere experiments, and have no resemblance to occurrences which take place in the human subject. Both these experiments have their parallel in man. A not unfrequent disease is that termed *intus-susceptio*. In this case, one portion of the intestine, generally a higher portion, passes into another, a lower portion. At the point of entrance the intus-suscepted portion of intestine is apt to be strangulated. The ring of strangulation may be justly compared with the ligature in this experiment; and, in a word, similar processes of adhesive and of ulcerative inflammation take place; the strangulated portion of intestine is separated into the canal, along which it proceeds until it is expelled per anum. These two plates, one of which belongs to the transactions of a "Society for the Improvement of Medical Knowledge;" the other to a publication from "The Army Medical Museum," at Chatham, represent such portions of intestine.

Nor is the second experiment without its parallel in the human subject. Cases of *hernia* have had this character, and this event, precisely, however rarely.

Other events in the human body occur more frequently, especially in tropical climates, equally illustrative of the conservative processes of inflammation. A friend of mine, not two miles distant from this spot, during a residence in India, became the subject of *hepatitis*, or inflammation of the liver. Suppuration took place. In addition to a more diffused induration and tenderness, a circumscribed tumour appeared in the hepatic region. This tumour became exquisitely tender, red, and fluctuating; in short it was the pointing of an abscess of the liver. It was opened with the lancet; the pus exuded, the abscess contracted, and with the external opening eventually healed. Now, consider what important processes must have taken place before this event could be accomplished. If the abscess of the liver had perforated the peritoneal coat of that organ, in its natural state, the pus must have passed into the abdomen; the most acute and frightful peritonitis would have been the consequence, and the patient would have been speedily destroyed. By what means was the abdomen preserved from this fatal irruption of pus? The peritoneum situated immediately above the abscess inflamed; lymph was diffused upon its surface; similar processes took place in the portion of peritoneum lining the parietes of the abdomen immediately contiguous; and these two membranes became adherent. Through these two folds of serous membrane, and the intervening layer of lymph, the ulcerative inflammation pierces and opens an issue, the cavity of the abdomen being secured, for the pus contained in the subjacent abscess. Thus pus eventually penetrates through the abdominal muscles and cutaneous textures, and issues externally.

Sometimes, by similar processes, an abscess of the liver opens into the intestine, and the pus is voided *per anum*.

But a still more remarkable event of the same kind is that of the exit of the pus of an hepatic abscess through the bronchia and trachea. In this case, not only the adjacent peritoneal surfaces, but the adjacent surfaces of the pleura, must become united by adhesive inflammation, and the pus must penetrate through the successive layers of the substance of the liver, of the adjacent adherent folds of peritoneum, of the muscular texture of the diaphragm, of the adjacent adherent pleuræ, of the cellular structure of the lung, and of the bronchia, before it could make its exit through the trachea by an act of expectoration!

The safety of these various processes depends entirely upon one particular circumstance,—the peculiar character of the membrane which *covers*, as distinguished from that which *lines* the hollow viscera or canals. Were the order of these membranes reversed, every abscess in such viscus, every solution of continuity in such canals, must inevitably terminate fatally. Opposed to the establishment of the adhesive inflammation, contiguous mucous membranes would not unite, and effusion would take place into the abdomen, inducing the fatal inflammation to which I have alluded. Or, suppose the character of the inflammation of the covering or serous membranes to be changed, as it is in certain circumstances, —in typhus fever, for example,—and the same calamitous event takes place, constituting one of the number of *perforations* which occasionally occur, and so suddenly prove fatal to the patient, and presenting to the medical practitioner a fearful subject of contemplation.

The adhesive inflammation proves a source of security to the patient under other circumstances. In cases of phthisis, or tu-

berculous consumption, cavities generally form in the upper lobes of the lungs. These cavities sometimes extend their dimensions until the portion of lung which remains is exceedingly thin. Nay, sometimes these cavities make their way through the last portion of pulmonary structure, and even the pleura, and burst into the thorax, inducing diffused pleuritis, and what is denominated pneumo-thorax. That this event does not occur more frequently is owing to adhesive inflammation, induced in the pleura covering the cavity, and the effusion of lymph, and the formation of a strong cartilaginiform defence, as it were, against the ulcerative process of perforation.

I have thus, Gentlemen, impressed your minds, I trust, with some of the most interesting and important facts connected with the principles of inflammation, and have convinced you of the deep interest of this subject. I shall now take the question up more methodically.

The first point which I must bring before you is,

I. *The Anatomy and Physiology connected with Inflammation.*

Inflammation has its seat in the minute and the capillary vessels. This distinction is neither unfounded in nature, nor unimportant in reference to our present inquiry.

If you examine the state of the circulation in the web of the frog placed under the microscope, which we will do together on some early day, you will observe the following phenomena:—

The blood is seen rushing into the field of view, along small vessels of a peculiar character, so rapidly as to render the distinction of the globules almost impossible. Trace this vessel in its onward course, and you will see that it divides into smaller branches, which again subdivide into other branches smaller still. This division and subdivision into smaller branches, demonstrate a vessel to be an *artery*. In all this course the blood preserves the same rapid movement which it had at the first.

At length a new phenomenon takes place: the artery now divides into two or more branches of an equal diameter with itself; the flow of the blood is less rapid, and the globules can now be distinctly seen. These vessels do not continue to divide and subdivide, but they unite and then divide, reunite and re-divide in turns, and form a sort of net-work. The velocity of the blood throughout this net-work of vessels is uniform, and far less than in the arteries. These are the *true capillary* vessels. The ultimate branches of the arteries from which they take their origin may be designated the *minute arteries*. The first roots of the veins, to which, in their turn, they give origin, are the *minute veins*. To employ the terms capillary arteries and capillary veins, would be to expose our ignorance of the real state of the circulation.

The force of the heart extends through the arteries, the true capillaries, and the minute veins. By a little contrivance this influence of the heart on the circulation in the veins is made obvious to the eye, although denied by Dr. Wilson Philip. You have only to tie a ligature slightly round the limb of the animal; this induces an impeded circulation along the veins, and the impulse given to the blood by each contraction of the ventricle, becomes perfectly evident in all the three series of vessels which I have enumerated and described.

The minute arteries, the true capillaries, and the minute veins, are beautifully depicted in these plates and these enlarged diagrams. But I purpose doing myself the pleasure of showing you these things experimentally with the microscope. You shall then trace these vessels for yourselves, and you shall watch the *effect* of several *causes* of inflammation.

In a future lecture I shall explain to you particularly how these three orders of vessels are affected in inflammation. I will, at this time, merely observe that every cause of inflammation seems to act by inducing a *physical* change in the texture of the lining membrane of the capillary vessels, with adherence of the particles of blood; and that, eventually, the blood becomes perfectly stagnant in certain of the vessels of the inflamed part; whilst the minute and larger arteries become enlarged and affected with increased action.

If you wish for further information on this subject, I must refer you to a little work of my own, entitled "An Essay on the Circulation of the Blood," published in 1831. I am gratified to find that Professor Müller has spoken of this volume in terms of great commendation in his lectures, and in his "Handbuch der Physiolgie."

I now proceed to treat of

II. *The Causes of Inflammation.*

The causes of inflammation may be divided into—

1. *The Mechanical.*
2. *The Chemical.*
3. *The Vital.*
4. *The Constitutional.*

Mechanical violence, including incision, laceration, contusion, &c., is a frequent source of inflammation. The first of these effects is simple; the subsequent inflammation seems to be Nature's process of cure, and is, therefore, a good illustration of inflammation from a *vital* cause. In the cases of laceration and contusion, in which these are slight, we have a physical impression made upon the capillary vessels of the part, such as probably occurs in every case of inflammation. If the contusion be violent, there is frequently the death of some of the tex-

tures, and such a degree of injury done to the capillary vessels as may prevent their ever again conveying the blood.

The *chemical* causes of inflammation are principally—heat, which induces burns and scalds; cold, which occasions chilblain and frost-bite; electricity; the acids, the alkalies, &c. These probably all act by inflicting a physical injury upon the capillary vessels.

The principal examples of internal inflammation from the operation of chemical causes, are those which have arisen from the attempt to swallow hot water, or acrid fluids. Some part of these fluids may reach the stomach and produce inflammation in that organ; but the principal result is an affection (œdema) of the rima glottidis, with symptoms resembling those of croup. I first called the attention of the profession to the accident as it occurs in children from drinking out of the spout of the tea-kettle, or teapot.* A similar result followed, in one sad case, the administration of a liniment by mistake for a draught. The physician should be alive to the possibility of such an event, for the cause of the affection might be concealed by a guilty nurse.

The character of the *vital* causes of inflammation has already been explained. A simple incision is healed by ahdesive inflammation; a thorn is removed by the suppurative; and these are vital processes,—instances of inflammation excited by the vital energies.

The *constitutional* causes of inflammation operate in producing furunculi, or paronychia; erysipelas; gout, &c. Erysipelas, in certain epidemics, is prone to gangrene. The carbuncle of the plague, the *pustule maligne*, and the hospital gangrene, afford other examples of mortification arising from constitutional causes. There is a peculiar gangrene of the cheeks, and of the pudenda, in infants, arising from constitutional circumstances, which will be noticed in a subsequent lecture. I published an account of the former†, and Mr. Kinder Wood of the latter‡, some years ago. All these probably arise, in every case, from constitutional causes, and are to be prevented only by attention to the condition of the stomach, the bowels, the secretions,—in a word, to the general health. The effects of the ergot of rye are produced through the medium of the constitution, or of a poisoned state of the system.

Exposure to wet and cold, rubeola, &c., induce internal inflammation through the medium of the general system, or, to express my meaning more distinctly, through the medium of the nervous and vascular systems.

I have thus, Gentlemen, given you subjects for meditation; endeavour, before we meet again, to make them your own by considering what facts and what principles in inflammation have been associated together. Treasure up these facts for their own intrinsic value, but especially for the general instruction they afford.

(Lecture III.)

Gentlemen:—My usual mode in teaching has been to commence each successive lecture with a *recapitulation* of the former one. This plan has many advantages; it enables me to recall to your mind the more important points of each lecture, and, if necessary, to supply omissions or correct erroneous impressions, and, as my recapitulations are brief, they will not occupy too much of your valuable time.

* * * * * *†

Proceeding, now, with my subject, and having explained to you both the anatomy of the minute and of the capillary vessels, and the causes of inflammation, I may next explain to you the *effects*, both immediate and remote, of those causes upon the texture and functions of the vessels which I have mentioned. This leads me to consider,

III. *The Nature of Inflammation.*

This has always been a knotty question with pathologists. Any one who had not observed for himself, might occupy your time for an hour in telling you what different authors have thought on this subject: but as truth exists in nature itself, and not always in men's ideas respecting it, I shall pursue the simpler course of placing before you, first, the result of my own observations, and then, if possible, the observations from which the results were derived. I will tell you what I have observed on applying certain causes of inflammation to parts which have admitted of being examined under the microscope; and I hope, on some early day, to shew you the phenomena themselves.

In treating of the *nature* of inflammation, it will be necessary to consider:—

1. *The true Capillary Vessels.*
2. *The Secretory Vessels.*
3. *The Absorbent Vessels.*
4. *The newly-formed Vessels.*
5. *The minute Arteries.*
6. *The minute Veins.*
7. *The larger Vessels and the Heart.*
8. *The Blood itself.*

From my own observations of the condition of the capillary vessels in the web of the frog, in inflammation, I conclude that each cause of inflammation first induces such a physical effect upon the internal surface of those vessels, as leads to the adherence of the globules of the blood to it, and to their ultimate stagnation. This stagna-

* Medico-Chirurgical Transactions, vol. xii, p. 1.

† Edin. Med. and Surg. Journ. vol. xv. p. 547.

‡ Med. Chirur. Trans. vol. vi. p. 84.

† It is unnecessary to report this portion of the lecture.—Ed. L.

tion augments as the inflammation increases and becomes more diffused, and seems to constitute the essential character of the disease.

I have never been able to detect any action in the capillary vessels themselves, —any augmented or diminished action on the application of stimuli; and I believe that those who have fancied that they have observed such phenomena, have overlooked the effects of the infliction of pain upon the animal, and of the application of a stimulus upon the cutaneous tissues, and the subsequent adherence of the globules of blood to the internal surface of the capillary vessels.

It is, probably, by the partial obstruction to the circulation in the capillaries, that the minute arteries become enlarged, as I shall have occasion to state presently, according to the well-known law, that muscular organs augment with obstacles to their functions. The augmented action of the arteries probably induces the minute eccymoses observed in inflamed parts.

The stagnant globules gradually lose their form, their colour, their distinctness; and the cellular membrane passes into irregular shreds.

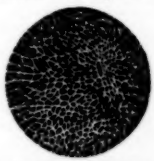
It is probably by the fact of stagnation that inflammation differs from mere blushing, from eruptions, and, in some degree, from erysipelas.

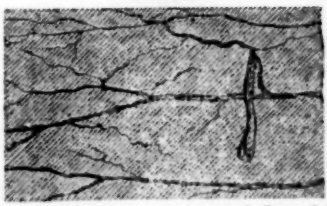
It is obvious that the secerning vessels of an inflamed part are variously affected in the varied conditions of inflammation: in the lower degrees of inflammation we observe the effusion of serum; in higher degrees of inflammation we see the secretion of albumino-fibrine, or coagulable lymph; and in still higher degrees of this disease, we have the secretion of pus. With the serum, and even with the lymph, we have, occasionally, the appearance of some portion of the red globules, or of the colouring matter, of the blood.

Under some circumstances, there is no doubt that these effusions of serum, lymph, and pus, are really secretions; when they occur, for example, at the surface of serous membranes; and (with the substitution of mucus for serum, and with the inversion of the order in which lymph and pus are thrown out) in the mucous membranes. Is it probable that these processes should be of one nature when they occur upon surfaces where they can be distinctly observed; and of another when they take place in parts more deeply seated and less exposed to observation? I am inclined to view the separation of albumen, of albumino-fibrine, of pus, from the serous membranes,—and of mucus, of pus, and of albumino-fibrine from the mucous membranes, in the varied degrees of inflammation,—as the result of peculiar processes, by means of which these matters are secreted from the blood. And I would extend the same remark to the formation of cicatrix, and the formation of pus and of cysts, and of abscesses in other cases.

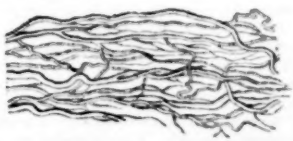
But if the functions of the secerning vessels undergo particular changes in inflammation, those of the absorbent vessels are not less modified: the progress of a phagedenic ulcer, the separation of a sphacelated part, can only be effected by means of the absorbent vessels,—the true absorbents, or the veins. The fact of ulcerated surfaces being in general absorbing surfaces, demonstrates the same thing.

Our next inquiry is into the newly-formed vessels. After lymph has been long poured out, it is found to become organised, that is, numerous vessels, carrying blood, are observed in it, pursuing a various course. Such vessels are represented in the subjoined woodcuts, copied from plates by Monro, Hunter, and Lobstein. The first shows the newly-formed vessels in cicatrix; the second a vessel passing through a small portion of pendulous coagulable lymph:





The third shows numerous vessels formed in a layer of lymph.



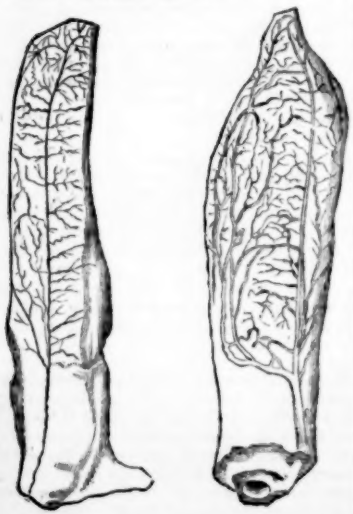
Vessels have also been observed extending into a coagulum of blood, as in this representation, also taken from Hunter:

The coagulum had been poured out from the surface of a puncture or small incision made by the trocar for the cure of hydrocele; it adhered to the investing membrane of the testis, by means of these numerous blood-vessels. In a third case, new blood and new vessels appear to be formed, which have no connection whatever with the living structure.

It is generally asserted that there is a series of vessels which only circulate the serum of the blood, and which exclude its globules. I believe this is a mere hypothesis, and that there is no evidence of the existence of such vessels. Vessels which only admit of single globules will appear colourless. In looking upon, or through, the web or the mesentery of the frog, we only detect lines of redness in the course of arteries and veins which are large enough to admit a considerable number of globules in the space of their diameter. In inflammation, the minute arteries which usually convey only single globules at a time, enlarge, admit a greater number, acquire the colour of accumulated globules of blood, give that colour to the parts in which they are situated, and become obvious to the naked eye. This is distinctly traceable in inflammation of the conjunctiva.

The condition of the minute veins has not been ascertained.

This enlargement of the blood-vessels is not confined to the minute arteries. The larger arteries in the immediate vicinity of the inflamed part, also become greatly enlarged. This effect is distinctly seen in this sketch from Hunter:—



It represents the two ears of a rabbit, one inflamed, in consequence of having been frozen and thawed, the other in the natural state. They were injected at the same time, and consequently with the same degree of force. The artery of the inflamed ear is observed to be considerably larger than the corresponding artery of the other ear.

This augmented size of the arteries of an inflamed part, is owing to the obstruction in the circulation in the true capillaries. *Every* such obstruction produces this effect, according to a general law. Apply a ligature to the principal artery of a limb. The circulation is then carried on (if the limb do not immediately perish from want of blood) by the collateral arteries, which become enlarged for this very purpose. This is the source of the success of the Hunterian operation of tying arteries of limbs for aneurysm, —even the principal arteries. In inflammation the blood is propelled along channels, not, in general, in *new* channels, indeed, but in the pre-existing channels enlarged. When, in excessive inflammation, or in feeble and disordered constitutions this cannot be effected, the part dies, and thus we explain the occurrence of sloughs and sphacelus.

It is not certainly known how far this enlarged condition of the arteries extends from the seat of inflammation. The pulse of the radial artery, leading to an inflamed hand, is more forcible than that of the other wrist; the veins leading from the inflamed hand yield their blood more freely than the similar veins of the other arm; the heart also beats with an augmented impulse and greater frequency. These are the facts which prove the influence of the inflammation of a part upon the arteries and veins in its vicinity, and upon the heart itself.

It has been much disputed whether augmented redness in an internal part indicates inflammation; the distinction between the redness of an inflamed part, and that of a part congested by an impeded flow of blood along its veins, has not been clearly demonstrated. The question might be readily submitted to experiment: we need only induce inflammation of the mucous membrane of the small intestine in one dog, tie the vena portæ in a second, and compare the two accurately, with and without injection by the arteries and by the veins. In the inflamed part we have frequent slight ecchymoses, as in a sketch from Hunter, a magnified portion of inflamed tunica vaginalis testis; and I have seen the same appearances in the inflamed web of the frog.

What are the comparative appearances in *congestion* from obstructed return of venous blood?

The blood itself is well known to undergo considerable changes in inflammation: the appearances of cupping, and of buff, and of the blood drawn from a vein are sufficient evidence of this fact; if the same appearances

have not been observed so familiarly in arterial blood, it is probably because arteriotomy is much less frequently performed than venesection.

Inflamed Web of the Frog.

I have thus endeavoured to give the *facts* which we possess in regard to the nature of inflammation, whilst I have discarded all useless *conjectures*. The condition of medical science still requires this separation of what is ascertained, from what is only imagined,—of the true from the false: to discover the former, and to detect the latter, are equally benefits conferred upon our profession.

CASE OF

IMPERFORATE OS UTERI,

WITH

RETENTION OF THE MENSES.

By JAMES OWEN, *M.D., London.*

L. E., aged 20, has never menstruated. Has been afflicted most severely for the last five years with pains arising from the progressive growth of tumours proceeding out of both iliac regions, for which she had been treated by various medical men, and in a great variety of ways, but without deriving any relief. Being called to see her on Saturday, the 15th of April last, I found her seated on a chair, by the fire, quite hectic, her face covered with large drops of perspiration, and exhibiting every symptom of intense pain. These distressing symptoms always commenced with her menstrual period, and continued for about a fortnight, they then subsided a little, and she had comparative ease until her time of being unwell, which brought with it a renewal of her sufferings. Pulse 120; strong; skin clammy; tongue rather clean; bowels pretty regular. Upon examining the abdomen, which was considerably enlarged, four tumours were found, one, very large, on the right side, ascended from the right iliac region as high as the false ribs. Three others, on the left side, rose out of the left iliac region, one above another, giving the idea of a beaded arrangement. Each felt of about the size of an orange. The top one did not reach quite so high as the apex of the tumour on the right side.

After a tedious examination of the abdomen, fluctuation was detected at the very apex of the large tumour, and the following diagnosis was given:—"Distention of the womb from a collection of the menses, depending, most likely, upon an imperforate state of the hymen." Having expressed this opinion, an examination, per vaginam, was proposed; to this the mother objected, but finding the patient herself willing, the mother assented. Upon examination, the finger entered the vagina, for about an inch and a half, but was there stopped by a strong tense membrane, fibrous, and irregular on its exterior surface, and without any perforation, a small probe being stopped by all parts of it. Strong pressure on it gave no pain, but, when suddenly made, shook the contents of the uterus, and gave the patient the sensation as if something moved at the top of the large tumour.

The situation of this membrane, which was beyond that of the hymen, rendered the diagnosis so far incorrect, but threw no doubt on the course which ought to be pursued. An operation was now proposed, to which the patient assented, saying that "she would have it done if she should die by it."

As a preparatory step she was ordered a saline draught, which operated briskly three or four times. Next morning her pain was less acute, the fluctuation at the top of the large tumour was more perceptible, and the obstructing membrane had receded about half an inch farther into the vagina, proving that the brisk action of the cathartic had so unloaded the vessels, and altered their state of vascularity, that absorption of part of the thinner contents of the uterus had taken place, an effect which might be expected, *à priori*, by any one recollecting Magendie's experiments on venous absorption.

An incision was now made in the obstructing membrane, about three quarters of an inch in length, with a common scalpel, from left to right, and from above downwards, as recommended by De Haen in his "Ratio Medendi," as the best means of avoiding injury of the bladder and rectum. A discharge of dark glairy blood followed, of the consistence of treacle, and in quantity about four pints,—pressure being made on the abdomen as long as any considerable quantity continued to flow.

A plug of lint was introduced to keep the cut edges from growing together, the abodomen was carefully bandaged, and the patient was put to bed. She soon fell into a refreshing sleep, the first she had enjoyed for a considerable time. The plug of lint was removed twice a day for about a week, and at each removal a considerable quantity of thick dark blood was discharged, so that in estimating the whole quantity, it is within the truth to say that it consisted of between five and six pints.

The patient continued to improve very rapidly for three days, and enjoyed a degree of ease which she had not known for years; but on the night of the third day after the operation, peritoneal inflammmation came on. This proved rather obstinate, but was ultimately reduced by the ordinary means. After this attack she again began to improve, and was progressing very favourably; the abdomen had become quite natural, and the uterus, as felt through the parietes, seemed to contract daily, as it does after child-birth, until it had arrived at its healthy dimensions.

The discharge had ceased, and the part cut had receded into the vagina, and was felt in the natural position of the os uteri, so that every thing was now natural, and the patient was very happy. In this state she got up to have her bed made. The weather being very unfavourable she caught cold, which unfortunately produced pneumonia. As she was previously much reduced I did not venture to bleed her, but trusted for a cure to the tartrate of antimony, with sinapisms, followed by a blister to the chest. Although these means made some impression on the affection of the lungs, yet the tartrate of antimony caused such purging and vomiting as brought on inflammation of the bowels, and I think more particularly of the descending colon, as over that portion of the bowels she could not bear the slightest touch. The pulse was now 130, and very weak; she had heats and chills in quick succession; countenance sunk and hectic; a fœtid black discharge came from the bowels; and there was retention of urine. The urine was drawn off. She was ordered pills of calomel and opium. A large sinapism was applied to the abdomen, so long as she could bear the heat, and was immediately succeeded by the emplastrum lyttæ. This acted more quickly than usual, in consequence of the skin being excited by the mustard, so that in six hours there was a fine blistered surface. This was covered with a large poultice, over which warm fomentations were applied, unremittingly. Under this treatment she soon found herself considerably relieved.

The discharge from the bowels now became less frequent, less offensive, and of lighter colour. At this time she was ordered an enema consisting of *tincture of opium*, ʒj.; *tincture of hyoscyamus*, ʒj.; *mucilage*, ʒj.; in a pint of strong beef-tea. This was retained, and had a good effect both on the bowels and strength.

April 26. Pulse continued at 130; cough troublesome; considerable expectoration; heats and chills; urine retained; severe pain in the occiput, with occasional palpitation. The urine was again drawn off, which gave considerable ease; sinapisms were applied to the chest, before and behind, and she took the tincture of digitalis, with hydrocyanic acid, in large doses, until the heart's action was moderated, and the pulse fell to 100. The hydrocyanic acid was now omitted; the digitalis continued, with small doses of acetate of morphia. The pulse gradually fell to 86, which had a decided effect on all the other symptoms. The only one which continued obstinate was the pain in the occiput, which was removed by a blister to the nape of the neck. From the patient's extreme weakness, diffusible stimuli were ordered, with enemata of beef-tea, from which she derived considerable support. These means being discontinued, she was ordered quinine, with light nutritious diet, under which she continued to improve, and on the 4th of May menstruated for the first time. When I took leave of her on the 6th of May her functions were all regular; she was having a motion once or twice a day; the tongue was clean and moist; the appetite good; the pulse 84; the urine regularly voided; and her countenance was healthy and cheerful. If this imperfect outline of what I consider to be an interesting case prove useful to any of the numerous readers of THE LANCET, I shall not regret having forwarded it for publication.

19, Great Portland-street, London,
Oct. 4th, 1837.

ON THE TREATMENT OF
FRACTURES OF THE LOWER EXTREMITY,
AS PURSUED
BY MR. LISTON
AT THE NORTH LONDON HOSPITAL.

By T. HERBERT BARKER, *Esq., late House-Surgeon to the Hospital.*

FRACTURES OF THE PATELLA.

Apparatus required.—An inclined plane of a length according to that of the limb, extending from the tuberosity of the ischium to a little beyond the heel, of sufficient breadth, and with ridges on the sides, to contain a pillow upon which the limb may rest comfortably. The inclination of the plane should be such as to raise the heel about twelve inches above the level upon which the tuberosity of the ischium rests. A wooden splint, of breadth in proportion to the bulk of the limb (the lower part of the thigh and upper part of the leg), hollowed out a little in the centre at the sides, and about a foot and a half long, and rollers and padding, complete the apparatus necessary for fracture of the patella.

Application of the Apparatus.—The foot and leg are to be bandaged with the rollers, to prevent infiltration, and the bandage is to be carried loosely over the joint, and continued for a short distance above it; the splint, well padded with tow, is then to be applied to the posterior aspect of the limb, its centre being opposite the fracture; this splint is to be fixed to the limb by means of bandages loosely applied, and the whole is to be placed upon the pillow on the inclined plane.

Remarks.—The apparatus and its application, as described, is simple, yet efficient, since an osseous union is considered by some surgeons as not the one which is the most to be desired, even if it were of more frequent occurrence. That an osseous union will occur, if the tendinous aponeurosis covering the fractured patella remain entire, or if, after the laceration of that membrane even, the fragments be brought very accurately in contact, and confined in that position, there is no doubt. Several preparations in the collections throughout the country prove this fact; two or three very beautiful specimens of ossific union of fractured patella may be observed in Mr. Liston's valuable museum.

By placing the limb upon an inclined plane, extending from the tuberosity of the ischium to a little beyond the heel, and by supporting the body somewhat nearer the sitting than the horizontal posture, the extensor muscles are relaxed; and attention to this position, with the loose application of bandages, will bring the fragments sufficiently in contact without any other approximative machines. Immediately after the receipt of this injury, the limb should be thus treated, and the tension and ecchymosis, or effusion into the joint, treated by the application of warm fomentations, and of leeches if necessary; proper attention also being directed to any constitutional derangement which may occur.

Too much stress cannot be placed upon the importance and necessity of applying the requisite apparatus in this, as in all fractures, (with, perhaps, the only exception, fracture of the olecranon) as soon as possible after the receipt of the injury, for, by their judicious application we are doing that which is most likely to prevent subsequent local mischief, and to diminish it if it have occurred. Nothing can be more unsurgical than to attempt the alleviation of this local mischief without regarding the injury which has produced it, and is keeping it up; yet, not only do we see practitioners applying leeches, lotions, &c., to fractured limbs, before applying apparatus, with the view to diminish inflammation, ecchymosis, swelling, &c., but actually in some cases neglecting the application of apparatus to the fracture, in their anxiety to combat any urgent constitutional symptoms, such as delirium, and fever, which may have arisen, and been kept up, in consequence of the neglect of which I am complaining; numerous have been the deformed, and almost useless limbs,—oftentimes have operations been obliged to be performed, and not uncommon have been the deaths,—in consequence of this very frequent, but ill-founded, treatment of fractures.

When the fragments of a fractured patella have been retained for some time within half an inch of each other, firm ligamentous union will have taken place. From five to six, or seven, weeks, are generally required for this union to take place, when passive motion may be commenced. A very useful plan of producing gradual motion is for the patient to be seated upon the end of the bed or table, with the foot of the injured limb projecting beyond it, at first little more than the foot, but gradually increasing the length of the projection from day to day. This may be aided by friction over the joints, with or without a liniment; some surgeons have suspended weights to the foot whilst projecting in this manner, but they are scarcely necessary. The ligamentous union will be much more secure, on the whole, than one of bone. Although considerable stiffness of the kneejoint generally remains for some time, after either means of union, that by ligament will permit of more extensive flexion and motion of the joint, without the risk of snapping, than the union of bone, and the limb will be much more serviceable.

In perpendicular fracture of the patella, the limb should be kept extended by means of the same apparatus as in the transverse.

After fracture of the patella in either

direction, considerable benefit will be found by wearing a laced stocking and knee-cap; they will support the limb, and prevent its motion from being too free at first.

Compound Fractures of the Patella are, from exposure of the kneejoint, of serious consequence. When the laceration is very extensive, immediate amputation is recommended, and has generally been found necessary; when the wound is small, its edges should be brought together, the limb placed at perfect rest in a proper position, and other appropriate, local, and constitutional treatment resorted to; some cases of the latter kind have terminated very favourably.

The following are some of the cases of simple fracture of the patella, which were treated in the hospital in the manner described above.

CASES OF FRACTURE OF THE PATELLA.

Case 1.—Eliza Fletcher, ætat. 26, admitted July 7th, 1835, under the care of Mr. Liston. She fell when running down stairs, and was then brought to the hospital. There was scarcely any swelling in either limb, but the patient could move neither of them. On flexing the limbs spaces were evident between the fragments of bone, which were not observed in the extended position of the limb, and when the thighs were flexed, and whilst manipulating in the latter position, a transverse fracture of each patella was detected, crepitation being easily perceivable.

Both limbs were bandaged from the feet upwards to the middle of the thighs, so as to keep the fragments in moderate apposition; a wooden splint was applied behind, the legs were extended, and the thighs flexed by placing them upon a single inclined plane.

July 14. No unfavourable symptoms have appeared.

Aug. 14. The bandage, splint, and plane, were removed, and the limb placed in the horizontal position. Pretty firm union appears to have taken place, through the medium of ligament, a space being observed at each knee between the fragments of bone.

30th. She has regained a great share of motion in the limbs and will be able to leave the hospital soon, taking care to make but very moderate exertions for some time.

Sept. 8. Discharged cured.

Case 2. Harriet Taylor, ætat. 50, admitted under Mr. Liston, July 17, 1835. She fell down and struck her knee against the curb-stone: the limb was bandaged by a practitioner; and about a week after the accident she was conveyed to the hospital, when there was found a transverse fracture of the left patella, and considerable swelling of the soft parts around, the fracture having been occasioned by direct violence; and the upper fragment could not be brought in contact with the lower in consequence of the swelling.

The limb was put up exactly as in the preceding case; and the bandages were re-applied occasionally, in order to approximate the fragments more than was at first possible; and the position on the inclined plane was retained until

August 19. The bandages, splint, and inclined plane were removed, and firm ligamentous union found to have taken place; but the fragments are not approximated within an inch. She is directed to practise walking, a little at first, and to seat herself with the foot projecting beyond the end of the bed.

Sept. 15. She has tolerable power of flexing and extending the limb; there will probably be considerable stiffness of the joint as long as she lives.

18. Discharged.

Case 3. Elizabeth Saltmarsh, aged 43, admitted April 11, 1836, under the care of Mr. Liston. She leaped from an embankment, three or four feet in height, and in attempting to preserve the erect position felt something snap in her right knee, when she immediately fell to the ground, and was conveyed to the hospital. A transverse fracture was evident, and there was a space of one-fourth of an inch between the fragments. The limb was put up in the manner described, with the alteration of the bandages being applied in a figure-of-8 fashion instead of the reversed.

12. She passed rather a restless night, removing the limb from the inclined plane: she complains of pain, rather severe, in the knee, but there is no swelling or increased heat in the part. The bandages were re-adjusted.

13. She passed a much more comfortable night, having been in less pain.

27. The case has been progressing very favourably.

May 18. Mr. Liston directed the limb to be removed from the inclined plane.

25. The splint and bandages were removed to-day, and the fragments observed to have been united by ligament; the space between them is about a quarter of an inch in breadth. She moves about by the aid of crutches.

June 11. She can flex the limb moderately, and is able to leave the hospital.

Case 4. Augusta Attley, ætat. 21; admitted under the care of Mr. Liston, Feb. 7, 1837. Servant. She was walking down stairs in a hurry; her heels slipped, and she fell on her back down two stairs; and on attempting to rise found she was unable to do so. Mr. Liston happened to be in the house, visiting a patient, at the time the accident occurred; examined the limb, and found the left patella fractured transversely.

He applied a splint to the posterior part of the leg to prevent flexion, and sent her to the hospital.

The splint, well padded with tow, was placed behind the limb, and retained by a loosely applied bandage; after which the limb was placed upon an inclined plane.

Feb. 10. Her bowels not having been opened since her admission, she was ordered a dose of house-medicine.

12. She has complained of considerable pain in the joint, consequently the bandages were removed, and the limb fomented with warm water, which was followed by relief from pain; the knee is somewhat swollen.

13. The bandages have been re-applied.

20. The case is proceeding favourably; she complains of no pain.

March 7. The bandages are not interfered with.

12. She complains of great pain in the knee, which is swelled more than usual, and hot to the touch. Leeches, six in number, were directed to be applied.

14. She was relieved from the pain after the application of the leeches.

28. She is going on very favourably; the fragments are about half an inch, or rather less, asunder; and on moving one fragment the other is perceived to be moved also. She moves about with the aid of crutches, bandages being still applied.

April 1. The limb is gradually getting stronger; she sets the foot to the ground a little, and flexes the limb. She is directed to sit upon the bed, and to let the foot project beyond the end.

12. She is regaining much of the power of flexibility of the limb.

16. Discharged cured.

FRACTURES OF THE LEG.

Description of the Apparatus.—The splint which is now used in the *North-London Hospital*, for fractures of the leg, is a modification of the apparatus invented by M'Intyre, and consists of two plates of iron, varying in breadth and length according to the bulk and length of the limb; these are slightly curved laterally, to be adapted to the limb. The broader and shorter plate, for the thigh, is connected at its lower extremity, to the upper end of the narrower and longer plate for the leg, by means of hooks, and admits of being carried to any angle with the latter plate by means of what is called a female screw, which is placed on the posterior aspect of the splint, and is moved between a fixed point in each plate. (See *Fig.* 1.) The longer plate, for the leg, becomes narrower towards its lower extremity, and for the extreme eight or nine inches is continued merely by narrow slips of plates on the sides, being completely wanting behind, to permit of the cushion upon which the heel is to rest, falling through. The side plates which have just been named, are about an inch and a half broad, and in each plate there is a long opening, by means of which the foot-board may be made to move up and down to adapt itself to the various length of the limbs. At the extremity of each side-plate, another branches off posteriorly, at right angles, about two inches in length, and to the ends of these plates is fixed, by means of pivots, a transverse plate which rests upon the block or bed; the tranverse plate is perforated by holes, which may serve a useful purpose under some circumstances, requiring the apparatus to be nailed or screwed to the block or bedstead upon which it rests. A screw is attached to the foot-board, which admits of its sliding along the opening in the lateral plates, and of being placed at any angle with the leg-piece of the apparatus; the foot-piece is made of wood, and is of various size, adapted to that of the feet of patients. Two or three inches from the upper end of the foot-piece, on its outer surface, is inserted a button, to which a tape which is attached to a sock to be worn by the patient, is fixed. (*Fig.* 1, p. 84.) Besides the apparatus above described, pads stuffed in the manner mentioned in the first part of this paper*, and of breadth and length to fit the plates of the splint, and the foot-board: a sock made of flannel, and of the size of the foot, with a double tape attached to it, a little above the centre of its sole. Tow, or charpie, and bandages, are the articles necessary for properly applying it to the fractured limb. A block should be considered a necessary appendage to the machine, since it is exceedingly serviceable in very severe injuries, favouring the return of blood, and diminishing every tendency to congestion, infiltration, or too high inflammatory action in the part.

Application of the Apparatus.—A splint must be chosen, of proper length and breadth; the foot-board must be accurately adapted to the length of the leg by means of its sliding along the lateral plates at the extremity of the leg-piece; this should be done by measuring the sound limb. The thigh and leg plates must then be carried to a suitable angle (which must vary according to circumstances, as we shall soon see) by means of the female screw; and the foot-board placed at the proper angle with the leg-piece. A cushion of sufficient length and breadth must be placed along the splint, made to cover the edges of the plates, and hollowed out in the centre to receive the limb; a pad must also be placed against the foot-board.

The splint being in readiness to be placed under the limb, extension, counter-extension, and coaptation must be performed by one assistant grasping the limb above or over the fracture, with his left hand, and

* See LANCET, May 20, 1837.

above the ankle with his right: having restored the limb to its proper length and form, he should direct his attention to the retaining it in that position, whilst another assistant applies a bandage to the foot and leg as far as the knee, in order to prevent œdema, and places the flannel sock upon the foot. This being accomplished, the leg is still to be supported above the fracture with one hand, and below it with the other; moderate extension is to be kept up, and the limb raised very gently, when the splint is to be accurately placed under it by an assistant; the leg must then be placed upon the padding, and slight extension kept up by the hand placed over the instep; the tape affixed to the sock is to be carried over the end of the foot-board, and secured to the button, which has been referred to; a soft cushion of well-carded tow is to be placed over the instep and ankles, when the bandaging may be commenced, the roller being first passed around the limb and apparatus at the ankle, then carried to the toes, passed around the foot-board, and alternately around the foot-board and extremity of the leg-plate of the splint, until the whole of the former is covered, when it is to be continued around the limb, in the reversed fashion, to the upper part of the thigh-piece, taking care not to include, in the bandaging, the screw between the two plates, but passing the roller between it and the splint. The limb may be placed upon a block of suitable height, and a cradle placed over the whole, to remove the weight of the bed clothes, and to prevent any motion of the limb through them. (See *Fig.* 2.)

Fig. 1.

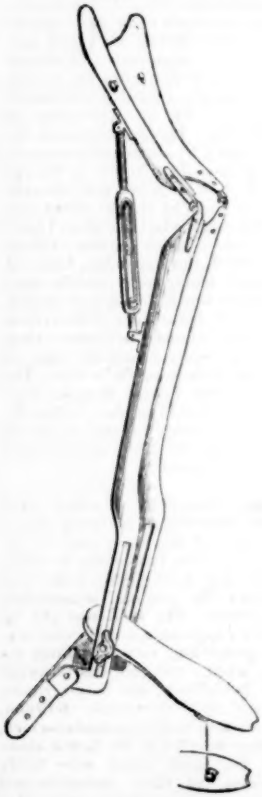
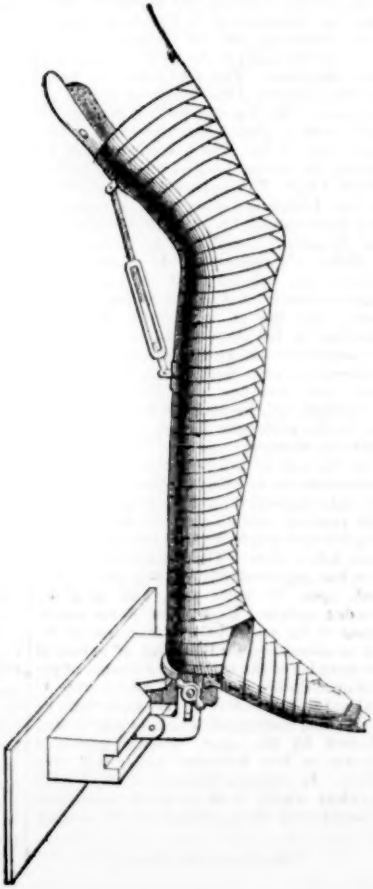


Fig. 2.



Remarks.—The plan of treating fracture of the bones of the leg, which has been described, has been found pre-eminently efficient; for which reason I have been inclined to describe it, and its advantages, to the members of the profession, who, practising in the country, may not have heard of M'Intyre's apparatus, or who may have been prevented from purchasing that apparatus from its great expense.

The apparatus, of which Mr. Liston's is a more efficient and much less expensive modification, was originally invented by M'Intyre, whose career of honourable usefulness has been lately suddenly arrested by death, and whose loss will be lamented by several members of the profession. The massive wooden apparatus of Bell, Cooper, and others, probably afforded the idea to M'Intyre, and aided in the construction of his own more simple and useful machine. Since its introduction it has been extensively employed, and its advantages fully proved, particularly in the North of England and in Scotland. This apparatus has been used in fractures of the femur as well as of the bones of the leg, and for that purpose is made with a sliding thigh-piece; but the inefficiency of the double-inclined plan of treating the former injuries has been before adverted to.* This apparatus was modified by Mr. Liston in consequence of repeated conversations with his pupils at the bed-side, who frequently complained of the expense of M'Intyre's apparatus. Mr. Liston expressed his opinion that an instrument might be constructed at one-fourth the expense, and that in it several objections attaching to the other might be obviated; he commenced his experiments, and after the construction of a few, giving each a fair trial, and correcting any objection in the succeeding one, he concluded by introducing to the profession the one which is now made by Sheldrake and Co.

In fracture of the bones of the leg, the indications are to bring the broken extremities into apposition, and to retain them in that position, maintaining the limb of the proper length and form, until firm union shall have taken place. These indications have been but imperfectly fulfilled by placing the limb upon its outer side, and applying wooden splints. Restriction of the movements of the whole limb in fractures of the leg is necessary, for the effect of action of the muscles of the thigh, or of motion of the foot upon the bones of the leg, is very evident; and unless the motion of the whole limb be completely restrained, which is not accomplished by the short wooden splints, a greater or less deformed union will take place. In *compound* fracture of the leg, an accident which is of frequent occurrence, complete rest, during attention to the wound, and the repeated application of the wooden splints, cannot possibly be procured. The well-being of the patient is consequently very much endangered, and the cure in the most favourable cases retarded. In cases of *simple* fracture of the leg occurring in unfavourable subjects, in persons whose systems had been debilitated by a long course of intemperance, and where the wooden splints had been applied, and the movements of the limb had not been sufficiently restrained, I have repeatedly known delirium and a whole train of symptoms evincing great constitutional disturbance to come on, and to be kept up so long as the local mischief has been allowed to continue, and to decline almost immediately on restraining the motion of the limb by placing it on the apparatus which has been described. Indeed, the speedy disappearance of all unpleasant symptoms, on changing the plan of treatment, has frequently been remarkable, and confirms the propriety of the observations I have previously made on the importance of applying the apparatus immediately after the receipt of the injury, and of not waiting to diminish the swelling, &c., by the application of leeches or lotions. The constitutional derangement induced by inefficient treatment, and its almost immediate relief on the application of Mr. Liston's splint, were strongly exemplified in Case 13 (to be afterwards reported). During the last two years I have seen but one case of *simple* fracture of these bones treated with this apparatus, followed by constitutional derangement; and the cases of compound fracture have not been attended by such severe disturbance of the system as I had been accustomed to observe when the splints were being repeatedly removed for the purpose of dressing the wound. The cases in the *North London Hospital* have been by no means few in number, so that the statement of the result of this treatment may be the more worthy of the consideration of surgical practitioners.*

* See LANCET, May 20, 1837.

* The case referred to, in which great constitutional disturbance occurred, was a case of fracture of the upper part of the tibia and fibula; of the former into the knee-joint; leeches had been applied before her admission into the hospital, immediately after the accident. The limb was put up on Mr. Liston's apparatus, and the case was apparently proceeding very favourably for some days, when erysipelas was observed around the leech-bites; and severe rigors, hectic flushes, and, afterwards, delirium, indicated some serious deep-seated mischief; abscesses were detected by Mr. Liston above and below the joint, which were freely opened; some of them communicated with the joint; the cartilages were discovered to be destroyed; suppuration was profuse and exhausting, and all hope of saving the limb was completely, and the life

In some cases where, from the tractability of the patient, the limb can be kept quite at rest during a long period, and where the fracture has been transverse and attended with very little, if any, displacement, splints may be unnecessary, inasmuch as they do not conduce to the advancement of the cure in any other respect than fulfilling the second indication, that of *preventing* motion; but it is certainly unsafe practice to leave a fractured limb, even if there be no displacement, unprotected by splints; and, as unsafe, it should be condemned by all judicious practitioners. This mode of treatment, *indiscriminately pursued in all cases*, cannot certainly be adopted in the present advanced state of the surgical art. In *compound* fracture the "free and easy" plan is even preferable to the mode of treatment which is very generally adopted, for the continued movements to which the limb is necessarily subjected in the bandaging and dressing it, with the splints in general use, are very prejudicial to the successful progress of the cure.

By the proper application of this apparatus, the whole limb below the hip is preserved from any motion whatever, and is retained of the proper length and form by the bandages which are applied, without any motion of either the limb or the splint. The rollers may be frequently removed, if required, without endangering the favourable progress of the case; as often as they become loose, or soiled, clean ones can be applied, and the limb thus kept constantly clean and neat; these are circumstances of considerable importance, particularly in cases of *compound* fracture. If the bandages and splint be properly applied, there is no necessity for the patient remaining in the recumbent position longer than a week. By means of crutches, and a band fixed to the extremity of the splint and passed around the neck, to keep the limb from the ground, he may move about a little in the ward; that this is a great advantage, every person will admit who has seen the direful effects of confinement to bed in many cases of these injuries.

The angle at which the thigh and leg-pieces of the splint are placed with each other, must depend on the situation of the fracture: the nearer the fracture is to the knee-joint, the more extended should the apparatus be placed, and *vice versâ*. When the fracture is near the kneejoint, the flexed position of the limb is found not to be so favourable as the extended, in consequence of a tendency of the upper portion of the bones to be drawn forward by the action of the extensor muscles, whose action is somewhat favoured, too, by the fulcrum formed by the condyles of the femur; whereas, in the extended position, the upper fragment is drawn as far forwards as is possible; the lower fragment in apposition with it, and the extensor muscles are relaxed; in the extended position, the femur affords greater support to the upper portion of the tibia than in the flexed position. The foot may also require to be flexed, or extended, according to different conditions of the fracture, and may be productive of great advantages in consequence of being judiciously placed, or of considerable deformity if neglected. If, whether the fracture be transverse or oblique (but more frequently when the latter), there be an inclination of the lower fragment, backwards, the extended position of the foot will be found most suitable to retain the fragments in correct apposition; if, on the other hand, the tendency of the lower fragment be forwards, a rather flexed position of the foot, and slight elevation of the heel, will be preferable.

In the majority of cases, where there is no particular tendency to deformity, a state midway between flexion and extension, or a very moderate extension, will be found the most advantageous position for the foot; I have experienced the advantages, however, of attention to the position of the foot, in several cases of fracture of the leg in the hospital, where there have been observed the varieties of displacement which have been alluded to. The tape attached to the sole of the sock is useful in preserving the foot straight upon the foot-board; without it the foot would almost invariably incline a little outwards; it is somewhat useful, too, in detracting from the pressure upon the heel. Where, from the nature of the injury, there is a tendency of the foot outwards not to be counteracted by the tape attached to the foot-board, it may be necessary to include a pad in the bandaging on the side to which the foot inclines; this was done in Case 15 (to be afterwards given), where the inclination of the foot outwards depended upon the splitting off the portion of the tibia at the ankle, to which the fibula is articulated, with fracture of the fibula a short distance above the articulation.

As in fractures of the femur, so, after removal of the apparatus, it is advisable to apply two pasteboard splints for a few days. I will transcribe a few cases from my case-book in illustration of the remarks contained in the preceding paragraphs.

(These will be given in an early number of THE LANCET.)

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of the patient, nearly, gone, when Mr. L. determined upon having recourse to stimulants and tonics, and, as soon as advisable, amputation; he did so, and the patient has left the hospital in good health. The *post-operationem* dissection confirmed Mr. Liston's diagnosis as to the fracture and state of the cartilages. I do not give the particulars of this case, since they are published in the LANCET. (*See* LANCET *July last.*)

CASE OF

COMPOUND FRACTURE OF THE TIBIA AND FIBULA,

WHEREIN 5¼ INCHES OF THE FORMER BONE WERE SUCCESSFULLY REMOVED.

By EVAN EDWARDS, *Esq., Surgeon, Caerphilly, Glamorganshire.*

THOMAS SMITH, a stone-mason's apprentice, a fine healthy lad, fourteen years of age, during his dinner-hour on the 2nd of May, 1833, ran to get into a tram that was, for the first time, to cross a newly-erected bridge; he slipped, and his leg got into the wheel, which lacerated the integuments over the inner condyle of the femur, a considerable way down the tibia, which was exposed and fractured rather above the junction of the upper with the middle third. Below the fracture a portion of the bone, about an inch and a half in length, and three-fourths of an inch in breadth, was denuded of its periosteum.

The surgeon first called to attend the case, considering it highly improbable that the limb could be saved, did little more than apply a simple dressing to the wound. In three weeks after the accident I was sent for by the friends of the patient to amputate the leg. On my arrival I found the boy possessing, as I believed, a good constitution, but at that time much reduced by the loss of blood, and the consequences of such an injury. I suggested the propriety of removing only a portion of the tibia, adding that the limb might be afterwards removed without materially increasing the sufferings of the patient, if circumstances required it. The fibula was slightly displaced, and partially united; the lower portion of the fractured tibia was riding upon the upper; there appeared a considerable deposition of ossific matter surrounding the denuded portion of the bone. I detached the bone from the soft parts as low down as I intended the section to be made; this was readily effected without injury to any vessel of importance; a thin splint was then passed under the bone, and it was sawn off five and a quarter inches below the fracture; a simple dressing was applied, secured by an eighteen-tailed bandage. An opiate was given that night, and a saline purgative the following morning. The boy soon seemed more tranquil than previous to the operation; the wounds after the fourth day were dressed with a solution of chloride of soda and Turner's cerate. In three weeks he was removed near to my residence (a distance of eight miles), and in ten weeks was sent home, the wounds healed, and with but little lameness, and very trifling deformity.

The only medicine administered was the sulphate of quinine, and an occasional dose of sulphate of magnesia.

Query—Have the ends of the tibia, viz., the fractured end from above, and the sawn end of the bone below, had any share in the reparation of the injury? Or is the reparation effected simply by the enlargement of the fibula?

a. Portion protruding through the integument.—*b.* Portion denuded of its periosteum. *c, c, c.* Ossific deposit for the reparation of the injury.

*** Our correspondent must have an erroneous idea of the manner in which bone is formed. The fragments of the tibia will not shoot out new bone, nor do we think it probable that the fibula will become enlarged for the purpose of supporting the additional weight which must be thrown upon it. We hope Mr. Edwards will not lose sight of the case, and will transmit us a faithful account of any circumstances which may occur in it hereafter.

FRACTURE OF THE SKULL AT ITS BASE, &c.

To the Editor of THE LANCET.

SIR:—I shall feel greatly obliged by your inserting the following case of extensive fracture of the skull, in your widely circulated Journal. I am, Sir, your obedient servant,

Northampton Infirmary, Oct. 2, 1837. H. G. BULL.

Richard Steele, ætat. 35, porter, was admitted, August 22, with compound fracture of the right leg, about three inches above the anklejoint. He had also a slight scalp wound at the superior part of the occipital bone, but no fracture could be discovered. The accident occurred from the shafts of the cart on which he was riding, breaking as he was going down a hill, when he fell upon his head, being at the time in a state of intoxication. He has been in the habit of drinking to excess daily, for the last year or two.

The accident happened about nine o'clock on the evening of the 21st, but he did not reach the hospital until four o'clock on the following afternoon. He has been insensible ever since the accident happened, and on his admittance he was so restless as to require a strait-waistcoat. On the morning previous to his admission, he had vomited a large quantity of blood, for which he was bled by a medical man residing at the place where the accident happened. At the time of his admission, his pulse was 72, full and strong; pupils dilated; bowels have not been moved since the accident. It was at first supposed that he was labouring under delirium tremens from drinking. The following medicines were prescribed.

Tincture of opium, 50 minims.
Camphor mixture, 3xj. Make a draught, to be taken immediately.
A common enema.
Camphor mixture; saline; of each, 3vj.
Sulph. of magnesia, 3j. Make a draught, to be taken in four hours. Shave the head, and afterwards apply a cold lotion to the scalp. Had great difficulty in swallowing the medicines.

23rd. Nine, A.M. Pulse 120, wiry, and intermittent. The enema has operated several times. Continue the medicines.

Four, P.M. Has not been able to take his medicine since the morning, and is evidently sinking fast.

24th. Died early in the morning.

Sect. Cadaveris, twenty-four hours after death.—On removing the calvarium, two large clots of coagulated venous blood were found on the anterior superior part of each hemisphere, and another between them lying on the corpus callosum. On removing the brain, a fracture at the base of the skull was discovered commencing near the tuberosity of the occiput, and extending parallel to its spine down to the foramen magnum. Another fracture encircled the foramen magnum, commencing at the above; it passed through the petrous portion of the temporal bone, on each side of the sella turcica, where it met its fellow. The posterior clinoid processes were nearly broken off. The fracture then passed forwards as far as the cribriform plate of the ethmoid bone. The other parts of the body were not examined.

*** Although from the extensive injury of the base of the skull, discovered after death, medical treatment could not have been of any avail in the case described by Mr. Bull, we cannot but think that the treatment presents an example of carelessness such as is more frequently witnessed in some of our London hospitals, than any where else among educated surgeons. A man falls upon his head, is brought to an hospital, with a wound of the scalp, in a state of insensibility, and evidently labouring under symptoms of effusion into, and laceration of, the brain, and yet the bones of the cranium are not examined! The man is supposed to labour under delirium tremens, and the short space of time which, under different circumstances, might have been vitally important to the patient, is occupied in the administration of opiates and insignificant draughts.

Our correspondent has omitted to mention the person by whom this case was treated. The practice is very like that of some *protegé* of the Poor-Law Commissioners.

PIGMENT OF ANTIMONY.

To the Editor of THE LANCET.

SIR:—In a report of the proceedings of the British Association, I observe a paper, by Dr. Traill, "On a New Compound of Antimony as a Pigment," lately discovered by him. Permit me, through the medium of your valuable Journal, to inform the Doctor that the compound in question was discovered previous to his communication being made. I have prepared it myself repeatedly, and have used it as a blue writing ink, the pigment being suspended in a solution of isinglass. As a proof of my assertion I can show specimens of it in my day-book and ledger, written nearly two years ago. I am, Sir, your obedient servant,

25, Princes-street, Old Compton-street, Soho, Oct. 5, 1837. J. C. ADDISON, Chemist.

THE LANCET.

London, Saturday, October 14, 1837.

THE proceedings of the BRITISH MEDICAL ASSOCIATION exhibit, in a strong point of view, the extent of our forbearance towards the dub-led migratory society. Until we had read the account, which was published in THE LANCET, of the bold and distinct declaration of the great and paramount object, which the members of the BRITISH MEDICAL ASSOCIATION keep steadily in mind, we had formed but an imperfect notion of the wily manœuvres which have obtained so much notoriety for the founder and other leaders of the Provincial Medical and Surgical Association. The contrast that is exhibited in the proceedings of the two Societies which are now claiming the confidence of the English medical public, is strikingly significant of the talent and integrity of the one, as opposed to the ignorance and hypocrisy of the other. One Society has been in existence during upwards of five years, and the leaders of it, in the language of concealment and mystification, speak only in general terms of the "GREAT DESIGNS" which still enliven their imaginations. The other, acknowledging an existence of not one year, proclaims before the whole world the one main object which the members of it are seeking to accomplish. What a contrast! If any of our readers had thought that we were unjustifiably severe in the strictures which we have offered on the conduct of the dubbish leaders of the Provincial Medical Association, they will now recall their former decision, and acknowledge that the leniency of our criticisms amounted to an imperfect discharge of our duty. On previous occasions we could only institute comparisons between the proceedings of the condemned and other societies. We can now refer to a contrast, and thus appeal to the judgment, by aiming at those strong impressions which opposing views are ever sure to create. If the dubbish prattlers who lead and mislead the Provincial Association, had acted honestly to the profession, would they at the end of *five years*, talk of the "GREAT DESIGNS" of their Society, merely in general terms? Mark the conduct of the President and other members of the infant Association. By that we are informed that the labours of the Association will be directed towards the establishment of *one system* of laws for the government of the whole medical body, and that the executive functions shall reflect, throughout every department, the excellence, purity, and utility, of the *representative* principle in the selection and the election of the controlling authority. This is, *really*, a GREAT DESIGN, and it has been nobly announced. Even now, at the eleventh hour, if the leaders of the migratory club will cast aside the language of concealment, and declare for the full and complete introduction of the *representative principle* into a general system of medical government in this country, under the sanction and protection of one law, organising a TRIPARTITE FACULTY OF MEDICINE for the three great national departments of this monarchy, we will at once hoist a flag of truce, and discontinue to comment in a spirit of hostility, on their past proceedings. It is right, however, that we should not follow the example which they have placed before us. It is right that we should address them *plainly*, and without equivocation. Hence, we must inform them, from information which we have received from all parts of the kingdom, that they now stand before the profession a disgraced body of individuals; and while there are to be found persons who plead the cause of the dubs, by endeavouring to show that the possessors of the steam and coin-created titles are justified in the course they have taken, by attempting to maintain their "order," a far more numerous class of observers deprecate in the strongest terms, the trucculence and servility which have been manifested by those general practitioners who have allowed themselves to be made the dupes

and puppets of the migratory showmen. Is it possible that another anniversary meeting of the Provincial Association could be held without an exposition of some of its boasted "GREAT DESIGNS?" It is *possible*, we suppose; but it is by no means probable; and when the exposition comes, by whom will it be regarded with admiration or respect,—whom will it stimulate to exertion in the cause of medical reform? The society has obtained a character for dishonesty, for narrowness, for illiberality of purpose, and unless some efforts of an extraordinary and vigorous nature be made by some of its members who are resolved to be emancipated from the thraldom of their slippery leaders, in a short space of time it will lose the opportunity of rendering even the slightest service to the cause of science, or to the interests of the medical profession.

If the opinions and feelings of the members of the medical profession were represented in an efficient governing body, created and sustained by the representative principle of election, medical clubs and societies would find no adequate motive for continuing their existence. Although the corruptionists, and all the incorporated monopolists, dread the *discussion* of medical abuses, and the imperfect state of medical law, yet they experience some delight in witnessing the establishment of such societies, from a hope that they may have the effect of dividing the members of the profession into *sections*, which will be kept from pursuing any one object, by contests of a frivolous and vexatious description. In cherishing this hope they are sure to suffer disappointment. Jealousies and apprehensions of an illiberal character may be maintained by a society which can only boast of *fostering* "great designs," without commanding that masculine power of mind which would admit of their being specified; but the declaration which has been already made by the BRITISH MEDICAL ASSOCIATION, in favour of an equal system of medical law, carried into effect by the adoption of ONE FACULTY OF MEDICINE, renders the latter a giant antagonist, which the pigmy enemies engendered by rancour and jealousy dare not encounter.

Parliament may be reluctant for a time to set aside, even by indirect means, the functions which the existing medical corporations can now exercise; but such appeals as the BRITISH MEDICAL ASSOCIATION has now made to the good sense and judgment of the community, must soon create a power in public opinion which will bear down all obstacles in the Legislature. The influence of the science of medicine on the welfare of society is so well known and generally acknowledged, that the means of acquiring and practising it must secure the first consideration in the measures of every intelligent government. Although the individual interests of a few persons may, for a while, raise up obstacles against the establishment of a national, well-organised, system of medical policy, having *uniformity of object* for its basis, and *uniformity of title for medical practitioners* as two of its inviting attributes, yet, within a comparatively brief period, the promotion of *general* must triumph over the maintenance of particular and *partial* interests; and the objects, or, rather, the ONE GREAT DESIGN of the BRITISH MEDICAL ASSOCIATION, must receive the cordial assent, not only of every thinking man in the community, but also of an immense majority of the members of the Legislature.

Until that auspicious period shall arrive, every medical reformer should omit no opportunity of exposing such medical abuses as may fall under his immediate observation.

THE discussion at the London Medical Society on the modifying influence of the vaccine matter over the march and duration of hooping-cough, is one fraught with much interest, and might have been productive of considerable benefit, had it been supported in that philosophical spirit from which alone we can hope to derive useful results in the science of medicine. How often shall we

have to entreat gentlemen to lay aside vague generalities and sweeping assertions for the more sober, but infinitely more useful, enumeration of facts. It is this propensity in men to generalise rapidly, without sufficient foundation, and to announce large and comprehensive problems as the result of their experience, without furnishing a tittle of the evidence upon which their general axioms have been built up,—it is this propensity, we repeat, which prevents medicine from making any steady progress, and which has hitherto placed it so far behind what are called the exact sciences. Unless a more philosophical method be pursued, unless facts be observed with care, multiplied with assiduity, and then submitted to the analytical scrutiny of a sound judgment, the science of medicine will ever remain as it is, for the most part, at present, a mass of conflicting facts, a theory incapable of demonstration. Thus, for example, to refer to the question of vaccination in hooping-cough, it is evident that if the vaccine virus really have the power of modifying hooping-cough in such a degree as to shorten its duration by several weeks, and, moreover, invariably render it an innocent disease,—this is a truth of very high importance, one which should be extensively, universally circulated. But upon what evidence does it rest? Mr. WHITMORE has invariably found vaccination diminish the intensity and duration of pertussis; Mr. LEESE has vaccinated "scores" of times, and thereby cut short the cough. Far from us be the idea of doubting the veracity of these gentlemen; we believe they spoke conscientiously; but we cannot help remarking, that this is precisely that kind of sweeping evidence which convinces nobody, and which leaves a question at the very point at which the speaker took it up. How much more satisfactory would it have been had Mr. WHITMORE informed the Society in how many cases, and under what circumstances, he had employed vaccination,—at what period of the disease,—whether in isolated cases, or during the prevalence of an epidemic. Far more useful, too, would it have been had Mr. LEESE produced a few detailed examples of the beneficial effects of the vaccine virus, instead of assuring the Society that he had employed it "scores" of times with success. In the one case the members of the Society and our readers might have formed some judgment for themselves; in the other case, all parties are compelled to see with the eyes, and estimate with the judgment, of the speakers, instead of being allowed to employ their own. The fact is, that the testimony borne to the efficacy of vaccination in hooping-cough is of a conflicting character, and unless evidence of that efficacy be fully laid before the medical public, no hope can ever be entertained of deciding the question,—a remark which may also be applied to many other points of medical science. Speakers and writers in the profession are continually putting forward opinions which they attempt to support only with proofs produced in so vague a manner, that, on inquiring into the evidence in order to estimate its value, nothing certain is discovered, and the mind is again left to wander in search of truth, wearied with disappointments, and almost hopeless of attaining certitude.

The observations of Mr. DENDY on JOHN HUNTER'S axiom, are interesting, but, we may remark, that the question of the possible co-existence of two constitutional diseases, has been long since set at rest. We published in THE LANCET, nearly four years ago, an example of the co-existence of small-pox and measles, and have since alluded to several other undoubted examples, and we may now add, that Dr. M'BRIDE distinctly mentions cases of small-pox supervening upon measles, neither disease being modified. This was observed during an epidemic which prevailed in the *Dublin Foundling Hospital*, in the year 1769. Dr. RUSSELL, also, has described two cases in which the two diseases ran their course together in the same individual at Aleppo, in the year 1765.

An Exposition of the Signs and Symptoms of Pregnancy, the Period of Human Gestation, and the Signs of Delivery. By W. F. MONTGOMERY, *M.D., Professor of Midwifery in the King and Queen's College of Physicians in Ireland.* London: Sherwood and Co., 1837. pp. 344.

OUT of the article, "Signs of Pregnancy and Delivery," published in the "Cyclopædia of Practical Medicine," Dr. Montgomery has produced the portly and handsome volume which now lies on our table. As the substance of the work has been before the public since the year 1833, it only remains for us to notice it in a general way. We do so with pleasure, for Dr. Montgomery has treated his subject in a complete and masterly manner,—one which is fully commensurate with the importance of the questions which are here discussed; not *currente calamo*, but with deep judgment and discretion. The work is ornamented with eleven plates, nine of which exhibit the various appearances of the mammæ at different periods of pregnancy, a symptom to which Dr. Montgomery attaches a good deal of importance. We have seldom seen more beautiful specimens of coloured drawings; they are equal to any ever produced in this country or on the Continent.

Elements of Physiology. By J. MULLER, *M.D., Professor of Anatomy and Physiology in the University of Berlin. Translated by* WILLIAM BALY, *M.D. Part I.* London: Taylor and Walton, 1837. pp. 428.

THIS is a valuable addition to our medical literature, although we fear it is much better suited for those whose time and occupations permit a deep study of the phenomena of the living body, than for those who may be called general readers. The present Part contains, besides a well-written Essay on General Physiology, the Physiological History of the Circulatory, Respiratory, and Lymphatic Systems; of Nutrition, Growth, and Reproduction. These various matters are treated in a clear and able manner by Professor Müller; and their interest is much increased by frequent illustrations drawn from comparative physiology. The translator has added several notes relative to the more recent discoveries in physiology, and a number of well-executed woodcuts, derived from various English and foreign authors.

NOCTES PSEUDO-PHARMACEUTICÆ.

SPECIMENS OF

EXAMINATIONS AT APOTHECARIES' HALL,

UNDER THE CERTIFICATE SYSTEM, IN THE

TWENTY-SECOND YEAR OF THE APOTHECARIES' ACT.

No. III.

Scene,—the "Funking-room."

LET the reader suppose that there are fifteen candidates assembled in the apartment at Apothecaries' Hall to which the above elegant *soubriquet* is universally given by medical students, waiting for examination on a certain evening, say the 25th of any month in the year. Some of these may be seen reading their notes,* others pacing the room with a hurried step and troubled brow; two or three are seated in the angle of the room, in deep meditation, whilst a few seem to anticipate, with perfect confidence, the result of the ordeal, such as it will be, the buoyancy of their spirits being regulated, perchance by false hopes,—perhaps by well-justified expectations. The room is ill-proportioned, dark, and gloomy, considerately chosen for its qualities by the personages in the deeper recesses of the establishment, and admirably calculated to depress the vivacity of those who approach this tribunal of the medical youth of the "first nation on earth." The good spirits of some portion of the afore-mentioned assembly become, therefore, a problem to the observer.

Amongst other occupations of the candidates, one young man, as frequently occurs, who possesses a larger store of information than his fellows, is seen communicating certain facts to those of his companions who are less favoured by nature, or who have been less assiduous in their studies. The superior qualifications of such a student soon become known to the rest, and he is beset on all sides by inquirers, one wishing to know "what are the muscles of the abdomen;" a second begging to be told "how to obtain morphia;" a third having "never heard of gastro-enterité;" and a fourth anxious to be reminded as to "what

* Memoranda taken at lectures, or during private instruction.

exanthemata means." The term "exanthemata" thus used, is incorrect, true enough, but we report *verbatim*, and therefore quote it as originally proposed.*

We may now suppose the business of the night to be commencing. Four candidates are first "called in" for examination. They "pass" from the stage, and are replaced by four more, who also disappear from the scene, and now there arrives at the place of inquisition the young man who, by his perfect knowledge of the practical points of his profession, has won the respect of all his compeers in the funking-room. *He*, in obedience to the summons, enters the examination-room. His guide is a black-engowned young man, whose appearance cannot be termed prepossessing, though, to do him justice, the worthies who rule within over the destinies of the medical profession of Great Britain—we shudder as we name their power, and reflect on their capacity and qualifications,—might have chosen a worse Charon for the duty. Politeness and civility *may* be bought from this functionary. He *can* emulate the departed Simpson of Vauxhall, in affability, when a *present* (fees are "forbidden") has touched his sympathies.

Scene,—the Examination-room.

Well, the guide has conducted the candidate into a large room, in which (if after-dinner cups have not prevented) twelve examiners are found dispersed at four tables. Following his conductor, he wends his way to the Chairman, and is thence directed to the spot at which he is to be examined. As there are *four* tables in this room, it is quite a matter of accident, a lottery, whether the candidate is examined by a pert puppy, or an empty-headed bully; by a self-satisfied sneerer, or a superficial professor who has at any rate a due sense of the proprieties of life, and might behave like a gentleman. 'Tis a pity that the room is not hung with mirrors, that the ignorant and vulgar party who form the great majority of the Board, might see reflections of themselves therein. In the darkness of the Hall the self-elected junto really consider that they constitute the *elite* of the profession! Extraordinary deception! Why, even their cotemporaries in Lincoln's-inn-Fields express a contemptuous opinion of the drug-dealing licensers at Rhubarb Hall, spite of the fellow feeling which should make them "wondrous kind," and their sense of the coarse and ungentlemanly bearing of the worshipful examiners in Blackfriars is openly announced. If a candidate at the College appear to be nervous and flurried, he will be told "not to fear, as they have no wish to *bully* or *frighten* candidates *there*." "Sir," they say, "you shall be treated here as a gentleman." We mention, in this particular, nothing that is not well known to candidates at the College.

But suppose the candidate to be placed before the best behaved man of the lot at the Hall,—one whose head is surmounted by a profusion of capillaries, which the vulgar compare to certain fusiform culinary roots. He opens a portfolio of prescriptions, two or three of which the candidate reads satisfactorily.

Examiner.—Camphor occurs in this prescription; what is it, Sir?

Candidate.—It is a concrete volatile oil.

Ex.—How would you make camphor mixture?

Cand.—I should first rub the camphor with spirit, and then add water to it.

Ex.—What else, Sir?

Cand.—Oh, there is another way of making it, merely that of putting a lump of camphor in water, when the water gradually becomes impregnated with it.

Ex.—Is water or spirit the best solvent for camphor?

Cand.—Spirit, Sir, certainly.

Ex.—Is there anything else that you would do in making camphor mixture?

Cand.—I suppose you mean straining it.

Ex. (pettishly).—Certainly, Sir.

Ex. (looking again at the prescription, he remarks carbonate of potass; "that is nothing;" still further on is the spiritus myristicæ). How would you prepare the spiritus myristicæ?*

Cand.—I do not exactly know the proportions of nutmegs, spirit, and water employed, but I am aware that they are used, and that the spirit is distilled over.

Ex.—What is the difference between distillation and evaporation?

* We take this opportunity of correcting an error in our last report, page 71, line 20, where ¼ *nitrogen* is erroneously printed for 14 *nitrogen*.

* The reader will please to understand that these questions are not *selected*. The examinations are not reported with a view to exposing only the absurd, idle, and offensive portions of the catechism; but are made to embody the whole of the questions on the occasions to which they refer, in order that the entire scene may be estimated precisely by its merits.

Cand.—In both processes the first product is the same, but in distillation the vapour is condensed by cold, in a part of the apparatus.

Ex.—From what kind of vessel would you distil small quantities?

Cand.—A glass vessel.

Ex.—And large quantities?

Cand.—A metallic vessel.

Ex.—Why?

Cand.—Probably because the metallic vessel is the best conductor.

Ex. (contemptuously)—*Probably*, Sir? Are you not *certain*?

Cand.—I think that that is the reason.

Ex.—What is the state of caloric in vapour?

Cand.—It is latent.

Ex.—At what temperature does water boil in a *metallic* vessel?

Cand.—At 212 degrees of heat.

Ex.—And in a *glass* vessel?

Cand.—At 214 degrees.

Ex.—How would you prepare he infusion of digitalis?

Cand.—With the leaves, boiling water, and spirit of cinnamon.

Ex.—When would you add the spirit?

Cand.—When the infusion had become cool.

Ex.—Why at that time?

Cand.—If I added it before it would be driven off.

Ex.—What is the boiling point of alcohol?

Cand.—Between 170 and 180 degrees.

Ex.—No, Sir, a little below 170.

Ex.—Where is the water condensed in distillation?

Cand.—In the worm.

Ex.—What do you use where the tube is connected with the receiver?

Cand.—Clay and different substances are used.

Ex.—But what do you call it?

Cand.—I forget at this moment.

(The examiner here beckons to his colleagues. When they arrive he appears to sneer, and shakes his head. The candidate looks round confusedly, being distressed at these unexpected indications.)

Ex.—What is the difference between alumina and clay?

Cand.—Alumina is the basis of clay?

Ex.—What is alum?

Cand.—It is a super-sulphate of alumina and potassa.

Ex.—Oh! a *super-sulphate*. What is the use of the potass?

Cand.—To promote its crystallization.

Ex.—How much alum does water take up?

Cand.—I do not know exactly, but I am aware that it will take up ten grains of alum to the ounce of water.

Ex.—Suppose I put two glasses of water before you, one pure, the other distilled; how would you know the difference between them?

Cand.—I do not think that I should know by the appearance.

Ex.—Oh! you would not? (Frowns).

Cand.—Really, Sir, these questions are so peculiar that you have quite confused me. If you will take me on materia medica, anatomy, or the practice of physic, and afterwards return to chemistry, I should be obliged.

Ex.—No, Sir, you must know ELEMENTARY CHEMISTRY. Pray how is heat diffused from a red-hot ball?

Cand.—By radiation.

Ex.—Well, Sir, suspend it between two glasses; what occurs?

Cand.—I am not at this moment sure whether the caloric is refracted or reflected.

Second Ex.—What is *reflected*?

Cand.—Thrown back, Sir.

Second Ex.—What does it come from?

Cand.—Reflecto, to bend back.

Second Ex.—Ah! to *bend* back, then.

First Ex.—What is the mode of preparing sulphate of iron?

Cand.—Iron, water, and sulphuric acid are employed; the water is decomposed, and the oxygen unites with the iron, forming oxide of iron, with which the sulphuric acid unites, forming sulphate of iron.

Ex.—What is given out?

Cand.—Hydrogen.*

Second or third Examiner.—It won't do. (The others nod assent. The examination ceases.)

Cand—I have told you that I am much confused, yet you reject me without giving me a chance on subjects of *practical importance*. (Turning to the principal in the *field*) —May I come up again next week, Sir, if I must be turned back now?

Worshipful Examiner. — No, Sir, — six months—Act of Parliament — No, Sir. (Struts away).

Scene,—the Ante-room again.

Candidate walks out quietly, and having reached the place whence he came, states that he is rejected, which fact every one in the "funking-room" declares to be "impossible!" and some of them declare it to be "d—d nonsense to try to humbug them in that way" with false statements, but at last the guide in the black gown is appealed to, when that functionary declares the announcement to be quite true. We suppress the expressions of surprise and disgust

* The candidate had here become so flurried by the manner and tones of the examiners, that an additional remark to the effect that "the iron was oxidised by the sulphuric acid" was too indistinctly given to be reported *verbatim*.

which this proceeding of the worshipful Board elicits from the astonished students, who had been led by a sense of the merits of the candidate to expect a different result. On some occasions we are induced to report all that reaches the ear of an observer, that the minuteness of the sketch may bear evidence to the observant mind of the fidelity of the report. On this occasion we leave those to whom the warm and generous feelings of students are known, to imagine the expressions of indignation which arose.

Number IV. will consist of an examination which was proceeding at another table at the same time that the above candidate was rejected, at which second table the ignorance displayed on every subject by the candidate was as conspicuous as the knowledge of the rejected candidate was full and sufficient, the ignorance of the second candidate being especially glaring in ELEMENTARY CHEMISTRY, which he was advised to study *when he was in practice*, a period close at hand, for *this* young man *passed his examination*, and forthwith received the license of the Company!

THE RIGHT OF STUDENTS TO ATTEND THE PRACTICE OF ENDOWED HOSPITALS, AFTER PAYMENT OF THE FEES.

To the Editor of THE LANCET.

SIR:—On Monday last I attended the introductory lecture at *Guy's Hospital*, delivered by Dr. Bright, when, in the course of the lecture, he informed the pupils, that they must consider themselves as being there only on *suffrance*. Now, having paid upwards of one hundred pounds to the hospital and the class-rooms therein, I always thought that I could be there as a matter of right, certainly not on the suffrance of the Governors. Perhaps, Sir, you can explain what Dr. Bright meant. I am, Sir, your obedient servant, A PUPIL.

*** Strange as it may appear, the language of Dr. Bright conveyed a correct knowledge of the weak footing of the students. The Governors of the hospital can, at any time, exclude the whole of the medical students from the establishment. The *medical school* constitutes no item in the will of Mr. Guy, and in the Act of Parliament which incorporated that hospital the entire control of the hospital is conferred on the Governors. If, however, a student were to be expelled unjustly, or if he were to be improperly deprived of any opportunity of hearing lectures, or of witnessing the medical and surgical practice for a payment which the Governors have sanctioned, either by a written law of their own, or by their accustomed acquiescence, then the student could, undoubtedly, find a remedy by obtaining heavy damages in a Court of Law. Hence there is something more in the "suffrance" than Dr. Bright seems to conjecture.

LONDON MEDICAL SOCIETY.

Monday, October 2, 1837.—Mr. BRYANT, *President.*

PROPOSITIONS and ILLUSTRATIONS respecting JOHN HUNTER'S AXIOM that "*no two actions can take place in the same constitution, or in the same part, at one and the same time.*"

A PAPER on this axiom was this evening read to the Society by Mr. DENDY, who said, that he had often been led to reflect on the exact meaning of this sentence, and as some recent cases of the co-existence of two species of vesicles which he had seen, had been apparently contradictory to this opinion, he wished to draw the Society's attention to this interesting point. It appeared, he said, that those who pinned their faith on the notions of our illustrious countryman, had interpreted in too strict a sense this expression; others had considered it as one of those gratuitous hyphotheses which the originality of a mind like Hunter's would, of necessity, conceive. Perhaps it would have been better had the two parts of the sentence been separate; as it was, he (Mr. D.) thought the question must turn on the literal definition of the word action. If Mr. Hunter intended to assert, that two different atoms could not at the same time occupy the same space; or that one set of vessels could not at the same moment be in a state of spasm and relaxation; these were truisms quite undeniable on the principles of the laws of physics. There were, however, some apparently opposing facts to Mr. Hunter's aphorism, which might, perhaps, be explained and reconciled by one of the following modes of illustration:—

1. Where the germ of one disease was in abeyance, while another was developed.

2. Where one dwindles or decays, and ceases to be active, the debris alone remaining, and acting as a predisposing cause.

3. Where one action overcomes another, or where one is constitutional the other local.

4. Where there is a blending of two actions, so as to form a third.

All these are perfectly consistent with the laws of pathology.

First. A germ of disease may continue latent throughout life, and never be developed. As the seeds of a plant may be preserved for years with the powers of fructification sealed up within it, or as the unimpregnated ovum remains quiescent in the ovary, so may strumous tubercles continue for a life in their incipient or granular state. Here we have consumption almost in the bud. But in this very system other and widely different diseases may arise, and may, perhaps, prove fatal, and yet the patient shall not have one symptom of confirmed phthisis. In the case of rabies, also, the virus may lie latent in the cicatrix of a wound even for the space of fourteen months; at the end of this, or some other period, the cicatrix shall inflame and ulcerate, absorption shall take place, and the rabid symptoms shall supervene. Yet at different points of time after the bite of a rabid animal, the author has known scarlatina and other specific diseases to run their course innocently; but, at length, rabies appears and kills the patient. Different diseases have different periods of development after the moment of invasion; thus a vaccine vesicle may run its rapid course during even the incubation of variola, and the author has seen measles and scarlatina under the same relative circumstances with regard to small-pox.

Secondly. During an attendance on a little patient with pertussis, it is not uncommon for the nurse to tell the medical practitioner that the hooping-cough has turned to measles,—not, of course, that the same infection has been the spring of two diseases so dissimilar, but that the debility of the body after the subsidence of measles renders the system peculiarly susceptible of fresh infection. Miss S., a young lady residing in Nelson-square, immediately on the subsidence of a severe attack of scarlatina was affected by an extensive eruption of common lepra on the arms and legs. In this case the system was rendered favourable to the development of a latent tendency, which, under the continuance of high health, would probably not have appeared. Perhaps we are constantly exposed to the influence of various infecting agents floating round us; but when our vital energies are normal and healthy we possess a power of resisting this influence. Even to a certain degree we can resist the chemical action of heat. Disease renders us susceptible by depressing this vital energy. We know, too, that fatigue in the same way predisposes us to be influenced by that contagion or malaria which gentle exercise enables us to resist. We may walk, or canter, over the Pontine marshes with impunity, but if we sleep in our carriage langour steals over us, our power of resistance is diminished, and we catch an ague. Fear also has the same depressing effect as in the anecdote related of the soldiers and the governor of Valetta during the raging of the plague at Malta; and our own cholera epidemic will afford us more recent examples. But without these analogies, although fear and fatigue, indeed, produce disordered actions, we constantly witness in one patient a long succession of maladies, even of a specific nature.

Thirdly. But the germ of diseases may not only be developed, but it shall be even considerably advanced, and yet it shall be checked in its course by an action more potent. Thus the author had known the vaccine vesicle which had become almost mature, on the occurrence of measles and scarlatina, lose its areola, and have no surrounding hardness. Here, then, are two diseases in different stages co-existent, and Mr. Hunter himself cites a case in point; in this case the matter of measles kept the matter of variola in abeyance. This seems in contradiction to the strict application of his theory, if we consider the variola at that time constitutional; in *confirmation* of it, if we believe it merely local, and not yet accompanied by its fever, certainly the two diseases were in existence together. That a disease which lights up fever will *cure* another which is merely local, is unquestionable. Thus the author had seen a severe attack of measles *cure* lepra of a most stubborn character, and general fever check, or cure gonorrhœa; perhaps on that principle of counteraction by which phthisis is kept, as it were, suspended during pregnancy, and speedily destroys after parturition. The author might here add, that he had seen pertussis decidedly mitigated by vaccination, but apparently at the expense of its own energy, a hint which should not be lost. Cases had been shown to Mr. Dendy in which he was told vaccine and variola were progressing together each in its *perfect* state, one of them, however, it turned out afterwards, was variola alone, the vaccination not having taken; in an other the local action appears to have insulated itself, and by a sort of concentration to have reserved sufficient power to resist fresh actions only in its immediate vicinity; but it is usually under these circumstances modified in its character. But an attack of small-pox may take place during the existence of syphilis in the constitution, and we are informed in a late Austrian Journal, that scarlatina anginosa, of a most malignant character, appeared four days after the full establishment of variola, and we proceed in our daily practice on the principle that the mercurial fever will overcome the syphilitic action. The former cases somewhat interfere with Mr. Hunter's assertion, that "no two fevers can co-exist in the same constitution," and, perhaps, the last example, also, unless he (Mr. D.) should take up the argument homœopathically and assert that all these

said diseases were not identical, but in close similarity, with each other.

It is certain that one established disease will act as a check to others. This is the explanation of what we term "latent indisposition to infection," the exact nature of which, perhaps, we may never discover. It tells us why we may sometimes encounter malaria with impunity, or come out unhurt from the very sink of contagion; it tells us why we are at times inapt to receive the vaccine virus; for why may not an invisible constitutional disorder, if the author might so term a tendency or diathesis, be equally efficacious in preventing fresh actions, such as cow-pock for instance, as a crop of strophulus or lichen which we constantly witness? This argument involves the most interesting question of the prophylactic influence of vaccination over variola; he would presume to offer his own opinion on this point in the following sentence. If during the *incubation* of variola, the vaccine vesicle has attained its *sixth* day, *genuine* and *perfect*, it will modify the variolous symptoms, the vescicles of which will not maturate; they are blighted. If vaccination be efficiently performed five or six days before the premonitory symptoms of small-pox, there will be a temporary struggle, but the latter will, in the end, be predominant. If the constitutional symptoms of variola have commenced ere vaccination was performed, it is wholly inefficacious.

Fourthly. In some cases the author believes there is a blending or coalescence of two diseases, thus changing the normal or genuine into a spurious or bastard action or disease. If not so, what, might be asked, is varioloid disease, if it be not variola, or vaccina, or varicella, and yet produced from variolous infection. Although it is true no two different fevers can exist, they may blend and form a third, a tertium quid, as the inoculation of plants will produce infinite varieties, or, as the mixture of an acid and an alkali, will form a netural product. If the varioloid be not this, it is, of course, genuine small-pox. Again, when variola and vaccina are said to run their course together, probably they are mutually influenced, and may be termed a mule; but although in many cases they have failed in inoculation, he was not prepared to assert that they were always unprolific. Even specific diseases may be modified by constitution or diathesis; thus struma will aggravate syphilis; what is this but a third or mixed disease; indeed Mr. Hunter himself has inadvertently confessed this, in the following words:—"Venereal disease calls forth other diseases into action; this tendency is so strong that it has taken place before the venereal is subdued." Now, is not this modified syphilis, for he adds, "Buboes, in certain constitutions readily become scrofulous." The same argument will apply to scurvy and syphilis, i. e., the scorbutic diathesis may render syphilis phagedenic, cachectic, malignant; explaining why a *specific* remedy will not invariably cure; the system being obnoxious to it from its very nature.

Lastly. There may be an immediate admixture of two sorts of lymph; their product is a spurious vesicle; vaccine lymph may, for instance, be inserted into an herpetic vesicle; the result will be a mule; and we may, in this way, explain the formation and the nature of the spurious or imperfect vesicle of cow-pock.

Mr. LEESE, in the course of the discussion which followed, said he had seen varicella and small-pox in the same individual, at the same time; the variola was most distinct, and he had vaccinated another patient from matter taken from the cow-pock vesicle.

Mr. CLIFTON and Mr. DENDY had always found the cow-pox modify the variola; but they had not found when patients had been inoculated, or had taken the small-pox naturally, that the secondary small-pox was at all modified. In Mr. Leese's case Mr. Dendy was of opinion the vaccination could only have been local.

Dr. WHITING had seen two cases of secondary small-pox in the same family. In one instance the patient had been inoculated, in the other vaccinated; in both instances the secondary affection was modified in the same manner. The discussion on this point was adjourned.

Mr. Dendy's paper was illustrated by drawings taken from the disease, exhibiting the relative influence of vaccination over variola, and the characteristic appearances of various modifications of pock.

Monday, October 9th, 1837.

VACCINATION AS A REMEDY IN HOOPING-COUGH.

THE discussion on Mr. Dendy's paper was renewed this evening. With regard to the remedial power of vaccination over hooping-cough,

Mr. WHITMORE said, that he had employed vaccination as a means of a cure in that disorder for upwards of twelve years past. His experience went to prove that it invariably, not only materially, modified the affection at first, but in the course of a week or ten days completely cured it. This had occurred in all cases which he had had the opportunity of watching. He had vaccinated in all stages of the complaint, and always with the same result. Of course, however, his experience had been limited, as children were generally vaccinated early, and he had restricted the proceeding to those instances in which there was only one child affected in the family. It rarely occurred that more than one child in a family had not been vaccinated, and if more than one was affected with hooping-cough, the patient on whom the remedy was tried

would be constantly exposed to fresh affection. He had not, in any instance, tried re-vaccination in the disorder. His patients were all under the age of three years.

Mr. Leese had tried vaccination in hooping-cough as far back as 1809, at which time that plan of cure was communicated to him by Mr. Green. He had done it scores of times, and the cough was thereby generally considerably mitigated. He had, however, noticed that the vaccine areola was not so perfect as usual; it was not so circumscribed as natural. He had only tried this remedy in cases where the hooping-cough had passed the inflammatory stage, from fear of increasing the irritation. Regarding diseases which stopped the progress of vaccination, he had noticed that this interference occurred when diseases, which were accompanied with fever, supervened. When there was no fever present, the vaccination took its regular course. This was the case in syphilis occurring in children, as also in porrigo, except, indeed, when the fluids of the two eruptions got, by accident, mixed together.

Some further conversation took place respecting the real meaning of John Hunter's celebrated axiom, and various illustrations were advanced respecting it; the deductions drawn from which, by the different speakers, were, however, widely different. Mr. Dendy's paper embraces these illustrations.

Just at the rising of the Society, a desultory conversation took place respecting the identity of cowpock and variola; the subject will be entered into more fully at the next meeting.

SIR ASTLEY COOPER AT THE GLASGOW ROYAL INFIRMARY.

In going round the surgical wards of the Glasgow Infirmary, lately, in company with the surgeons and students, the first case that was shown to Sir A. Cooper, was one of simple fracture of the tibia, which was under the care of Dr. Auchincloss. Sir A. inquired, "what was the usual method of setting fracture of the femur in that hospital?" Dr. A. replied, that "he was sorry* he had not a case at present to show him; but that he always put up fractures of the femur in the straight position, after Desault's plan." Sir Astley then observed, "that the best method consisted in taking two boards, each a foot and a half long, and of about the same breadth, joining them together with a hinge, forming with them a double inclined plane, and placing the sound as well as the broken leg over this inclined plane. The advantage of that plan was (he said), that an equal traction was made on both sides of the pelvis, whereas, in Desault's plan, the one side of the pelvis was drawn down, while the other rose up proportionably." He requested Dr. A. to try this plan on the first opportunity, to which the doctor assented.

The next case was one of burn, from water. Sir Astley asked "how burns were treated here?" Dr. A. said, that "the bullæ were punctured, and the serum was allowed to escape, without the cuticle being removed; the part was then covered with finely carded cotton, and allowed to remain for ten days or a fortnight, when the cotton came off in a piece, leaving the skin entire."

Sir A.—How do you treat those cases in which the cuticle has been removed?

Dr. A.—The cotton is simply applied to the raw surface.

Sir A.—No flour; no oil?

Dr. A.—Nothing but the cotton.

Sir A.—How do you treat those burns in which there is great depression?

Dr. A.—The cotton is applied as before, and stimulants, such as wine, brandy, laudanum, and ammonia, are administered. I do not approve of Mr. Kentish's plan.

Sir A.—Neither do I.

The next case on which Sir Astley made a remark, was one of loss of cuticle from mechanical violence.

Sir A.—How are you treating this case?

Dr. A.—With cotton also.

Sir A.—I have found an application of liquor plumb. subacet., with gr. ij. of sulphate of zinc to the ounce, produce new skin in the course of eight hours. I find it the best application.

Dr. A.—In your lectures I think you state that colica pictonum was the effect of this application in two cases.

Sir A.—No; I never saw such an effect from it in my life.

Sir Astley now approached a case of aneurysm of the arteria innominata, to which a bladder, filled with a cold mixture, was applied.

Sir A.—I consider this to be a very excellent case for tying the carotid and subclavian arteries. It is now completely ascertained (although some still question it) that the ligature must be placed on the artery at some distance from the giving off of a branch, otherwise secondary hæmorrhage will be the result. A friend of mine lately doubted this. I advised him to try the experiment on a lower animal. Well; he took an ass, and tied the internal carotid near its origin. Nature was very kind to the poor ass; the ligature was long in coming away; the surgeon got tired of waiting; he began to pull at the ligature, when it suddenly came away; out gushed the blood, and the poor ass fell. The surgeon was then convinced.

The next patient had lately undergone the

* "Glad," Dr. Auchincloss must have meant.

Taliacotian operation. Sir Astley sat down upon the bed, and, with great *naiveté*, after a remark or two, told the following anecdote:—"What a capital nose you have got! A capital nose, indeed! It reminds me of the case of a young gentleman at Edinburgh, who had lost his lower lip, and who was courting a young lady. The lady would not have him, because he could not kiss her. The young man, in this dilemma, applied to Dr. ——, who cut an under-lip from below his chin, turned it up, and, in this way, made him a kissing lip. He now returned to the lady, with a good lip, was accepted, and in due time married; and I hope, my good fellow, the same fortune awaits you, if you wish it."*

The next case on which Sir Astley made any remark of note, was one of caries of the os calcis, with fungoid granulations, which had been in the hospital several times, the ulcer breaking out as soon as healed. It had been proposed to take off the leg.

Sir Astley.—What do you mean to do with this case, Sir?

Dr. Pagon.—I have tried various local applications, and will be happy to hear your opinion.

Sir Astley.—I would give her a wooden leg, but I would not take off her leg; make her walk upon her knee; send her out of the hospital, let her follow her occupation, and then dress the sore with *Liq. Oxyd. Arsen.*, ℥j.; *Ung. Cetacei*, ℥j., three or four times. This will give it a new surface, and then you may treat it upon general principles.

Upon Dr. P. apologising for occupying so much of his time, Sir Astley replied, "Oh, I have still a great love for the profession."

An enlarged breast, which, at a consultation, it was agreed to remove, was the next case, and the one which excited most attention. Dr. Pagon asked him, "Do you think it fungoid?" Sir A.—"I think not. I consider it to be hydatid disease of the breast. There is fluid in it. It has exactly the feel of ovarian dropsy." At this the surgeons of the hospital were astonished. Dr. P. thrust a bistoury into it, when out squirted a clear fluid, and Sir A. exclaimed, "There it comes!"

Sir Astley.—I would now advise you to pass a seton through the breast, which would break up the cells, and allow the fluid to escape. I should like to hear of the result of this case.

The result is, that Dr. P. did not pass the seton, but amputated the breast two days after. We believe the breast has been sent to Sir Astley.

The last case was that of a boy who had been operated on for calculus in the urinary bladder.

Sir A.—How do you operate for stone here?

Dr. P.—By the perineum, with the common staff and knife.

Sir A.—I am proud to have lived to see the day, when an operation which was formerly so difficult and dangerous, is now so simple and easy. Have you heard of Dr. Pee's method?

Dr. P.—No.

Sir A.—His staff has a slit in it in place of a groove, and the knife is so beaked as to fit the groove. After you have made the incision in the perineum, in the usual way, you introduce this knife into the slit in the staff, run it into the bladder, introduce your finger, feel the stone, and then extract it. What a simple affair! After you have got the knife into the slit you cannot miss to run it into the bladder. I have fourteen times seen surgeons run the knife along the staff, not knowing where it went, then introduce the forceps, seize the calculus through the coats of the bladder, and tear calculus and bladder away. What horrible suffering did these poor patients endure before they died! And let me assure you that the soonest way for a surgeon to attain eminence and distinction, is to be called in and finish an operation which another has bungled. In this way you get more credit than if you had undertaken the management of the case from the first.

* We remember hearing Sir Astley tell this story at Guy's, with the addition, that as the new lip was made from the chin, the man had A BEARD on his lip in due time,—rather an awkward result.

THE

TRIALS OF ANIMAL MAGNETISM, AT UNIVERSITY COLLEGE HOSPITAL.

To the Editor of THE LANCET.

SIR:—M. Dupotet concluded his experiments in animal magnetism at this hospital, on Tuesday, the 19th instant. This rather sudden cessation of the manœuvres arose, it is said, from the request of the medical committee of the hospital, that the experiments should be discontinued. On that day M. Dupotet, at the usual time of his performance, announced this wish of the committee. It may be useful to take a cursory review of these experiments, without adverting to trials of mesmerism on any former occasions, in order to ascertain how far M. Dupotet's assertions have been verified by his experiments.

The letter of your correspondent "T.," and the lecture of Dr. Elliotson, render it unnecessary for me to enter into the details which are there given. Dr. Elliotson has not been at the hospital since the delivery of his lecture, owing to his absence on the continent. Many of the experiments, and those

which I chiefly attended, have been performed during the absence of that gentleman. It will be found in Dr. Elliotson's lecture that no effect, except a slight one, in a solitary instance, had been wrought on male patients subjected to the ordeal. Several male epileptics have since been experimented on, and in no one instance has any sensible effect been produced. So far as these cases go, then, they keep the matter in the position in which Dr. Elliotson left it. Four female patients are mentioned by Dr. Elliotson as having been submitted to magnetism. Three of these have since continued to be acted on by M. Dupotet. The girl with ecstatic delirium has gone on much in the same way; but the other two have, on one or two occasions, receded from the regular track, and these wanderings are of importance, inasmuch as they interfere considerably with some of the assertions which have been made, and which are totally opposed to what the magnetiser has professed. For instance, on several occasions, the patient "Rebecca" has fallen back in her chair, with only one or two passes of the hand over the face, and again has awakened, as suddenly, during the time the magnetiser was attempting to keep up the sleep, showing, in the beginning at least, the effect of imagination in producing this state. Again, on another occasion, when the influence had been but slightly exerted, she was attacked with a slight fit of epilepsy; and here all the powers of the baron failed to awake her, though he passed his thumbs many times (as usual), and with considerable force, over the orbits; indeed, he seemed to have no power over the state which he asserts that he produced. It has been said that when a person is under the influence of magnetism, the operator only can restore the patient to consciousness, but in the case of Rebecca this has been found erroneous, for on one or two occasions her senses were restored when a person who had not touched the Baron, passed his thumbs over her eyes. This patient also has awaked on several occasions, without any transverse manipulations being made by any person; and during the state of insensibility she has answered questions in a perfectly rational manner, has smiled at her own rambling talk, and, on more than one occasion, has opened her eyes, quietly looked around her, and then, as quietly, closed them again, and waited with great patience until the Baron has come to awake her by means of the transverse motions over the upper part of the orbits! Could this girl possibly have been in an unconscious state? Indeed, this patient, during the unconscious state, has even asked permission to awake!

Regarding the prophetic power which has been evinced by this "prima donna of the magnetic stage," as she has been called, it is useless to deny that on some occasions, since Dr. Elliotson has been away, the scenes exhibited have been most absurd; in fact, they have bordered on the disgusting. The fallacy of the experiments, in this respect, has been unequivocally proved. It is true that the time last stated by the patient for her cure has not yet arrived; but then she herself varies in the date of that cure. One gentleman asked whether she knew the date she first stated, he having noted her words, but she could not remember it.

As to the power of seeing with the eyes closed all the experiments signally failed, save in one or two instances, where the patient *guessed* the time. I say *guessed*, because it would be absurd to suppose that she saw at one moment and not at another; yet this absurdity seemed to be cherished by some of the Baron's friends; for when the patient said at about four o'clock, that it *was* about four o'clock, by a watch, that statement was considered by them to be evidence of her seeing well with closed eyes, but when other watches were altered in their time, and placed before her, she never even guessed *near* the hour expressed by them, though, in one instance, a valuable gold watch, with its appendages, was placed in her hand, and she was to be allowed to keep it if she stated the time at which it was set. We may smile at such experiments being gravely conducted in the presence, on some occasions, of distinguished men. However, M. Dupotet has thus had every opportunity of fulfilling his promises. For myself, I am not so ready as your correspondent "T." to believe that there has no deceit been practised in the case of the patient of whom he says that "she is much too pretty and light-hearted to carry on a fraud." I apprehend that her vanity was flattered in the first instance by her being consulted respecting patients, and the means of curing them; questions being put to her during "somnambulism," which it required no ghost so to answer as to leave a doubt upon the point, and to present at the moment no means of detecting the truth. She thus became ambitious, and wished to seem to accomplish things which the Baron constantly promised she should perform, in her hearing, by means of his interpreter. What can be thought of the following answer to a question respecting the dress of a patient then before her. "Oh," said the magnetised girl, "I saw the dress before I came in, so that it is not a fair question!" Was this girl in a state of ecstacy? Moreover, her abuse, gross and offensive as it has been, to those persons who ventured to doubt whether she possessed any more power than another person with closed eyes, speaks loudly against her.

These experiments, then, respecting the powers conferred on patients by mesmerism, have proved that their possession is a fallacy, and the effect of this process at *Uni-*

versity College Hospital has only been the production of a state of sleep and partial insensibility, in two or three particularly sensitive females, subject either to hysteria or to epilepsy,—a state which does not appear to owe its effects entirely to the waving of the hands,—the imagination, as instanced in "Rebecca's" case, having unequivocally in more than one instance produced the result. It did not appear by experiment on that patient, that the magnetiser could do away with this effect at will, while the patient became fully awake without it. Regarding the case of the patient with ecstatic delirium, it must be remembered that she had been affected with epilepsy for a long period before her admission; that she always had a great reluctance to be magnetised, that the delirium came on after several manipulations, and that in being taken out of the state of delirium, by means of the process, she is kept in one position, much against her will, on some occasions, for more than twenty minutes. What effect have these facts on the results? On the whole, M. Dupotet, leaving entirely out of the question his shiftings from one point to another, and his invariable discovery of exceptions to the rules he lays down, together with the avoidance of direct questions, has adduced nothing as yet in the hospital, to prove that animal magnetism is not a fallacy, or anything more than a means of producing a peculiar state in very peculiar habits, which state resembles the coma following epilepsy, or the insensibility attendant on hysteria. I am, Sir, your obedient servant,

AN EYE-WITNESS.

Sept. 25, 1837.

[This letter has been authenticated.—ED. L.]

DISPUTE AT LIVERPOOL.

REPLY OF DR. O'DONNELL TO DR. MACRORIE.

To the Editor of THE LANCET.

SIR: It is hardly fair in you to allow the old surgeon to fire from behind the wall; let the fellow stand forth without mask, and, passing over this meanness, I engage to disprove every proposition he has advanced which regards myself; but I can have nothing otherwise to say to a person who pops out at me like a bushman.

And now, Sir, if you will allow me, I will contrast some of the statements made by Dr. Macrorie, which have been read to the patient, with those of the patient himself: and then, as briefly as possible, make a few comments, with the view of eliciting the truth and ending this dispute.

Monday. The patient it appears labours under complete retention of urine; and for this, purgatives are ordered without any attempt being made to relieve the bladder; such practice, I hope, needs no comment.

Tuesday. This morning, Dr. M. states, "we found him more tranquil, but he had not passed his water." Patient says, "he found me in extreme pain, I could neither sit, lie, nor stand. Dr. M. next states, that a bougie was passed into the bladder, and this organ completely relieved. The patient states, the large catheter (the size is No. 8, or 9), only passed through the first stricture; and he does not think the small bougie passed into the bladder, as there was so much of it left sticking out. It is very true some urine came by the side of it, mixed with a good deal of blood, perhaps about half a pint, but thinks it too much to say a pint. I entirely agree with the patient. I do not think it possible they could have reached the membranous portion of the urethra with their large bougie, or things must have got very much worse soon afterwards. He has now, and he had when I first attempted to pass a catheter for him, four strictures; the third was extremely tight and hard, and the surrounding parts extremely sensitive. I mention this because no allusion is made by Dr. M. to the state of the urethra, which I think would have been done had they known any thing about it. The fact is, the bladder was never reached, but the bougie was thrust through the urethra, making a false passage. A surgeon who knew what he was about, would not have been content with withdrawing half a pint or even a pint of urine; he would have emptied the bladder, and would, most probably, have allowed the catheter to remain in the bladder till the following day.

Wednesday. Dr. Macrorie says, on this day, "He was comfortable; had passed his urine; pulse quiet, tongue clean, and expressed himself as entirely relieved."—Patient. Oh! what a lie! On this very day, I was astonished that no water came. I inquired why my bladder held so little, and was informed that it was in a sickly state. The whole of the day was passed in the greatest pain and suffering.

Thursday and Friday. Dr. M. states, he was doing well.—Patient. On these days, I was so tortured with pain, that I found no relief in any posture. I passed from the bed to the stool, trying, by means of hot water and all other things, I could think of, to get rid of a little urine; but Dr. M. assured me that there was no water in my bladder, and that the pain in my back was owing to a little inflammation in the kidneys. He told me how he had been called to a lady in the neighbourhood, where the surgeon in attendance had mistaken the swelling of the bladder from retention of urine for a tumour; but that so soon as he had placed his hand on it he discovered its nature. This observation proves that Dr. M. considered Mr.

A.'s case to be one of suppression, not retention. The prescriptions, I think, prove the same. With regard to the remainder of Dr. Macrorie's paragraph, the patient denies its truth in the most energetic language. Now, what were these gentleman doing on Wednesday, Thursday, and Friday? Here are their prescriptions, they are not dated, and, therefore, we must guess at the order in which they were written.

[These prescriptions merely direct the administration of purgatives with opiates, and need not, therefore, be given in detail. ED. L.]

On Saturday, the Dr. began to suspect that there was some accumulation of water in the bladder. This he ought to have known during the whole of the week. He ought to have known that dribbling of urine from the penis is a sign of over distension. The supposition that the bladder is relieved by such dribbling is a mistake into which the ignorant have often fallen, and one which the tyro is recommended, in all books of surgery, carefully to avoid. The Dr. now admits that there was tenderness of the belly, thirst, and a brown tongue, but he says that his pulse was only 72. It is not possible. When I saw him in the evening his pulse was 130. He was tossing about in great pain, and covered with perspiration; and in this state, What was proposed? Why! to try the catheter, and if this failed, and it would have failed, to put into the rectum a suppository of six grains of opium. This was the *coup de grace*. Another observation, and I take leave of the Doctor. Dr. M., on taking leave of the patient, said, "Well, my dear Sir, I take my leave of you, and I hope you may be more fortunate than your poor wife has been." His wife died under my care. The patient has since said to me many times, "I could forgive him all the pain and torture I have been put to by him; but to attempt to distress my mind, by making me believe that you killed my wife, it is too bad. Now when you were called to her, she was too far gone in consumption; you told me, her case was hopeless the second or third visit: but, had he attended to her, and treated her properly in the beginning, when she had only the influenza, I feel satisfied she would be a living woman at this day."—Why not meet Dr. M., it may be said? I met him once, and I was so disgusted on that occasion that I determined never to meet him again. Should any professional gentleman require it, I shall be happy to state the particulars. I remain, Sir, your obedient servant,

J. O'DONNELL, M. D.

M. CHARRIÉRE'S CHALLENGE.

To the Editor of THE LANCET,

SIR:—In the last number of THE LANCET I observed an extraordinarily bold assertion, put forth by Charriére, of Paris' stating that *he* made *most* of the lithotritic instruments used in London. He some time ago boasted of the superior quality of his instruments, and I ordered some of them, with the view of comparing them with mine. He brought them over himself, and tried one of them with a marble, such as boys play with; it would not break it, and I then tried with my instrument, and broke the marble, with ease, into several pieces. He expressed surprise at the power of my instrument, but said, that if he could obtain the same price as I obtained, to enable him to put in the same work, he thought he could make them as well. This is a fact which he cannot deny. The French instruments may be seen at my house, and I shall be happy to sell them at a reduced price.

He is evidently angry that the Russian Government should have given me their orders for lithotritic instruments; but I would ask the profession, who is the most entitled to receive them, I, who invented and perfected the instrument, or Charriére, who merely copies it? Whatever alterations have been made in it, my principle is still adhered to, and it is much easier to copy an instrument which the inventor has spent much money and time in bringing to perfection, than to invent it in the first instance. I would, therefore, advise M. Charriére to keep quiet in this matter, and not risk the loss of his money. I am, Sir, your obedient servant,

JOHN WEISS.

62, Strand, Oct. 10th, 1837.

*** As Mr. Weiss does not, in his note, accept M. Charriére's challenge—probably because a trial of the kind has already been made between the two manufacturers,—we need not point out to him where the original of that challenge may be found; otherwise we should do so, in order that Mr. Weiss might see that M. Charriére does not, either in the French journal or in our extract, say that "*he* (M. C.) made most of the lithotritic instruments used in London."

MARYLEBONE INFIRMARY.

To the Editor of THE LANCET.

SIR:—Presuming that I am the "Candidate" for the office of surgeon to the *Marylebone Infirmary*, to whom you have alluded in last Saturday's LANCET, perhaps it may not be amiss, with your permission, to state briefly the particulars. An advertisement in "The Times," declaring the office of surgeon vacant, and calling for candidates to send in their testimonials of qualification on, or before, the 18th ult., to the Committee appointed by the Board "to receive and

examine" them. I accordingly issued circulars, declaring myself a candidate, and commenced my canvass. My success (if reliance can be placed upon men,) was beyond a doubt, and I made no secret of it. You may, therefore, imagine my surprise and indignation, to find, on the morning of examination of candidates and their testimonials, that five of the Committee (the whole being ten in number), three of whom were medical men, then, and then only, passed a resolution, disqualifying, as it *now* stands on the minutes, any person from being a candidate who practised as a general practitioner. If that resolution had previously existed on the minutes of the proceedings of the Board of Guardians, although I might object to it on principle, I should not have complained, but to pass such a resolution without the power of the Board, and at the very moment of examination, was not only invidious, but was evidently intended to favour some other candidate. I therefore memoralised the Board to be heard against the confirmation of that resolution last Friday week, stating not only its injustice and impropriety, but that it disqualified nine-tenths of the profession,—many of the late, and indeed I might say all, as well as the present members of the Council of the College of Surgeons, and all the surgeons in the army and navy. Although one of the medical men on the Committee was candid enough to admit, on the morning previous to the non-confirmation, that this resolution was levelled at me, and had before promised that he would move its non-confirmation, before two gentlemen, yet whilst the secretary was reading my memorial, he took up his hat, and left the board-room. I shall not comment further than to remind him of what Cicero says, "Justitiæ primum munus est, ut ne cui quis noceat." The facts speak for themselves, and show how united, and with what accordance some medical men combine to maintain a principle disadvantageous to themselves and the public; they also show how *far* a reliance is to be reposed in them by gentlemen belonging to a Board of Guardians, and I have no doubt that some of the latter have discovered this already. It is, Sir, this blind confidence which I deprecate, as well as the gross injustice of framing so invidious a resolution; and if in the coming contention (and contention it will be) for the annihilation of all invidious and unmerited distinctions, and the amalgamation of medicine and surgery, its members shall thereby forsake their own interest, the interest of the public, and the interest of science, then, Sir, shall I miserably deplore the baseness, envy, depravity, vindictiveness, and narrow-mindedness of human nature, so strikingly manifest in the profession. I am, Sir, with great respect, your most obedient servant,

WILLIAM BAXTER.

1, Queen Charlotte-row, New-road,
Oct. 3, 1837.

BRITISH MEDICAL ASSOCIATION.

To the Editor of THE LANCET.

SIR:—I am directed by the President to request that you will have the kindness to correct one or two inaccuracies which have crept into your report of the anniversary meeting of the British Medical Association, which might lead to mistakes.

When the President proposed the toast of "The Professors and Teachers of Medical Science, &c.," he did not say that "the Company were favoured with the *presence*," &c., but that "we have the pleasure of numbering amongst our *members*, or among *the company, this day*, men, second to none, as anatomists, physiologists, pathologists, and surgeons, and who have acquired European reputations," &c. Mr. Liston (inaccurately given *Wilson*), and Mr. Grainger, were not *present*, though they are *members* of the Association. Dr. Marshall Hall, in returning thanks for the vice-presidents and council, *did not say* "if I were at the top of the profession to-morrow, I would say as I do to-day that I view all my brethren as members of one body," &c.; but "if I were *out of the profession* to-morrow," &c.

I beg to hand you the list of the new Council elected by ballot. I remain, Sir, yours very respectfully,

MATTHEW FRENCH WAGSTAFFE,
Hon. Sec.

Oct. 10th, 1837.

Copy of the Scrutator's Paper.

Bayfield, S. J., Esq.	Hilles, M. W., Esq.
Beane, J. M., Esq.	Hooper, R. L., Esq.
Brady, C., Esq.	Howell, J., Esq.
Bristowe, J. S., Esq.	Hull, G., M.D.
Butler, J., Esq.	Ireland, C. G., Esq.
Castle, J., Esq.	Lane, G. B., Esq.
Clarke, J., Esq.	Linnecar, E. H., Esq.
Crisp, E., Esq.	Liston, R., Esq.
Davidson, R., Esq.	Menzies, R., Esq.
Delpb, N., Esq.	Parsons, G., Esq.
Doubleday, E., Esq.	Pilcher, G., Esq.
Eales, W., Esq.	Porter, T., Esq.
Evans, E., Esq.	Smith, J. J., Esq.
Farr, W., Esq.	Wakley, T., Esq., M.P.
Grant, R., M.D.	
Hall, M., M.D.	Webster, G., M.D.
Harrisson, C. H. R., Esq.	Whitmore, H., Esq.
	Wagstaffe, M. F., Esq.
Herring, W., Esq.	

Treasurer.—E. Evans, Esq.

Auditors.—J. S. Bristowe, Esq.; R. L. Hooper, Esq.; J. Howell, Esq.

At the first meeting of the Council since the anniversary, held this day, the 10th of Oct., G. Webster, Esq., was re-elected to the office of President.

"RUPTURE OF THE DIAPHRAGM PRODUCED BY VOMITING."

To the Editor of THE LANCET.

SIR:—A young woman, aged about 23 years, in good health, stout and plethoric, having eaten plentifully of fruit after a hearty dinner, retired to her bed, complaining of *severe headach*; she became sick, vomited a quantity of plums, and died shortly afterwards. No post-mortem examination of the body was made, but the following *curious* medical evidence (extracted from the "Oxford Chronicle" of last week) was adduced before a *non-medical coroner*:—

"Mr. Long, surgeon, of Banbury, was sent for, who stated, that the appearances (discolouration of the throat and chest) were caused by the progress of decomposition, which had advanced with unusual rapidity, and he believed her death was caused *by rupture of the diaphragm produced by vomiting*, and *not* by *apoplexy*, as might have been supposed from her complaining of her head."

It may be stated, that the gentleman who first saw the deceased, but who was not examined at the inquest, had previously given an opinion that death had been occasioned by apoplexy. I am, Sir, your obedient servant, R.

Banbury, Oxon, Oct. 10th, 1837.

BOTANY PRIZES AT APOTHECARIES' HALL.—*To the Editor.*—SIR:—I wish to suggest to Mr. Warde, the Examiner on Botany at the Apothecaries' Hall, the propriety of ascertaining the extent of knowledge possessed by the candidates at the ensuing examination, on the Botany of their own country. Many students have had peculiar opportunities of seeing foreign plants in greenhouses and at botanical gardens, but are totally ignorant of the Flora of England. Several young men whom I have known, who are reckoned tolerably good botanists, could not tell me the species, or the genus, or even, in some cases, the natural order, of any (the commonest) plant growing by the road-side. I am, Sir, your most obedient servant. A LECTURER ON BOTANY.

Oct. 10th, 1837.

CREOSOTE IN SEA-SICKNESS.—Mr. A. B. Maddock informs us that he has given the *creosote* as a preventive of sea-sickness, and found it prove almost uniformly successful. The only objection to the popular use of it is, Mr. M. states, the nauseous taste. That inconvenience might, perhaps, be overcome, he suggests, by chemical means, and thus procure a highly useful addition to the list of domestic medicines.

CLINICAL MEDICAL PRIZE.—Dr. A. T. Thomson, in his introductory clinical lecture last week, stated that, in addition to the two prizes which were annually given at *University College Hospital* for the best clinical reports, he had determined on giving a third prize to the student who, under the immediate superintendence of the physician, treated most scientifically a series of cases of one disease, and drew up, at the conclusion of such treatment, his opinions and experience regarding the treatment employed, and the relative advantages of the various means which had been used to effect the cures.

TO CORRESPONDENTS.

A Constant Reader. 1. One inquest is held on the whole. 2. One fee only would be receivable by the Coroner, or a witness. 3. The duties of every Coroner must be limited to his particular locality. 4. The work of Mr. Jervis.

A London Surgeon. We never publish reviews, either in the form of letters or editorial articles, which are forwarded by anonymous correspondents.

A patient should give his name, and state his facts in a clearer form.

Mr. Lewis's letter on hydrocele and acupuncture, with a copy of Mr. King's letter, was received, and was at once put into type for publication, but unavoidably delayed for a week.

The letter of *Mr. Mackewine* (or Mackenzie) with an analysis of Dr. Hancock's paper on tubercular leprosy, has been put aside from want of space.

We have not room to publish in THE LANCET, letters which are printed elsewhere a week before the pressure of matter will allow of their insertion in this Journal. The authors of such communications must be content with the minor gratification of seeing their productions in one periodical. We decline to assist their desire of shining with the same article in two or three periodicals in one cycle. That plan should be left to the adoption of *advertisers*.

Correspondent writing from Leamington. We did not consider the article to be either a good or a fair criticism. Besides, the the writer's want of confidence, in not honestly giving us his name, is ill calculated to secure for his remarks respect or attention.

Will *A Constant Reader* in the North oblige us with his intended "further remarks." We thank him for the letter dated September 29th. Communications will, at all times, be acceptable from him.